

APRIL, 1951

Apr 12 1951

Commercial Refrigeration

AND AIR CONDITIONING



**YOUR 1951 MARKET
IN THE
FOOD STORE FIELD**

MERCHANDISING, SELLING, INSTALLATION AND MAINTENANCE OF
COMMERCIAL REFRIGERATION AND AIR CONDITIONING EQUIPMENT



**YOU'LL
MAKE
A
GOOD
MOVE**

when you sell KOCH refrigerated display cases and refrigerators to your good customers for proper food preservation. KOCH offers you a complete line of profit-making merchandise . . . the line of least resistance. There's a size and model to meet every commercial need. It's your move. Fill in the coupon . . . or write today on your letterhead for more information.

NORTH KANSAS CITY 16, MO.

**KOCH
REFRIGERATORS**

KOCH REFRIGERATORS
North Kansas City 16, Mo.

CR-4

Send me complete information on the KOCH line of refrigerated display cases and refrigerators.

Name.....

Address.....

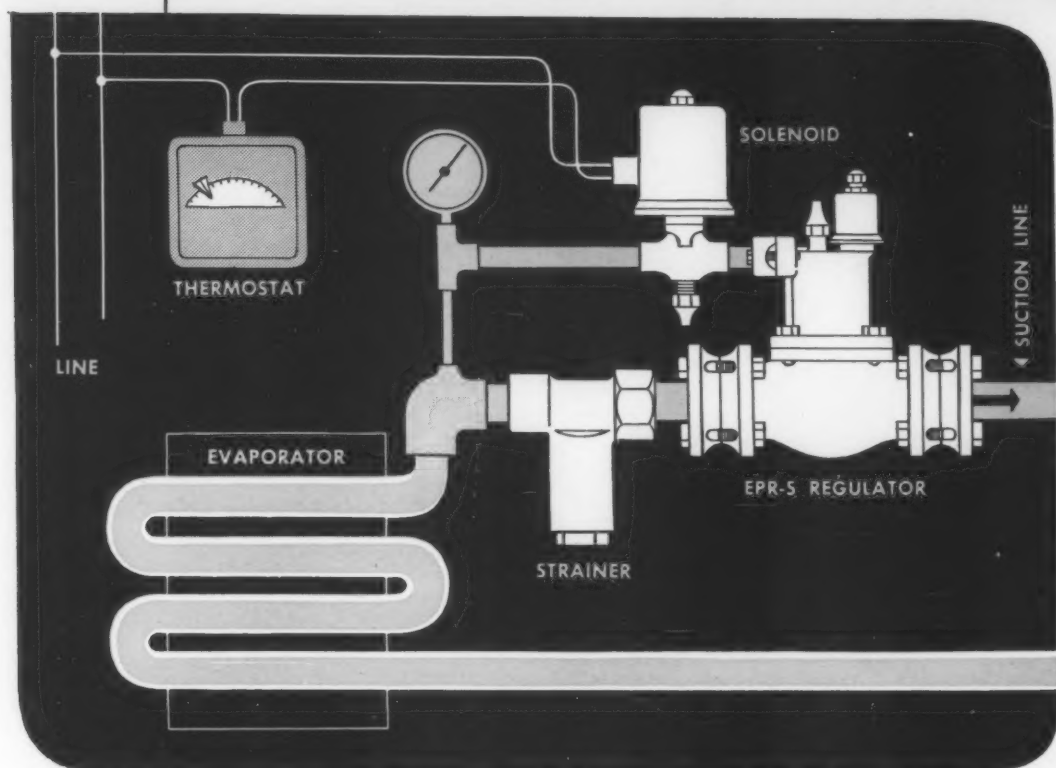
City.....Zone.....State.....

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ALCO

SOLENOID-EPR COMBINATION

for TEMPERATURE DIFFERENTIAL CONTROL



Try this performance-tested ALCO team—the EPR for accurate evaporator pressure regulation, plus the Solenoid for positive suction stop. Together, they solve the toughest close-control problems.

This ALCO Solenoid-EPR Combination is widely used on installations where pinpoint control is important: in the handling of plasma, biologicals, plastics and synthetics, and for food preservation on commercial and combatant ocean vessels throughout the world.

Try it on your next job where close control counts.

For further details, write for Bulletin 183.



SEE YOUR ALCO WHOLESALER

ALCO VALVE CO.

843 KINGSLAND AVE. • ST. LOUIS 5, MO.

4585

Circle No. 2 on Reader Service Card for more information
and AIR CONDITIONING • APRIL, 1951



packing something new
into small pumps
for air conditioning

some fellows are just never content

You know the type . . . they keep fussing with, working on, and solving problems that seem impossible to most people.

Time was, when many folks in air conditioning thought that the pumps used to recirculate cooling water in air conditioning systems were pretty good. And when compared, pump for pump, this was true. Yet the fellows in the I-R laboratories weren't content. They figured that if they could make a 1½ H.P. pump do the same work as an ordinary 2 H.P. pump, they'd have something really special to offer. First cost would be lower, there would be a saving on space and weight and, more important, installations wouldn't be as expensive.

So I-R engineers worked on this idea; and when they informed us they had succeeded, we wanted proof. Then they told us about "an impeller of new hydraulic

design," "extra heavy shafts designed for a maximum deflection of .001 inch," etc. But most important, they produced a line of Ingersoll-Rand MOTORPUMPS that proved to be tops in efficiency and reliability when compared size for size with *any* other type pump on air conditioning systems today!

This remarkably efficient I-R MOTORPUMP had a terrific impact on the air conditioning industry. For not only did it offer folks like yourself a way to recirculate cooling water with a smaller pump, but it was made readily available . . . right out of warehouses across the country. And these same warehouses offer service on all I-R MOTORPUMPS installed. Your nearest I-R distributor or representative has the facts and figures . . . call him in now, or write us for descriptive literature. Ingersoll-Rand Company, 11 Broadway, New York 4, New York.



Ingersoll-Rand

90 years of BIG PUMP know-how packed into small pumps for air conditioning applications!

MOTORPUMP

617-9

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APRIL, 1951 • COMMERCIAL REFRIGERATION

APRIL, 1951

VOLUME 8, NO. 4

Commercial Refrigeration

AND AIR CONDITIONING

Established 1944 as
THE REFRIGERATION INDUSTRY

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official affiliation with ANY
group, society or association.

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Tudor 6701

THE COVER . . . You can help yourself to profits by selling the kind of equipment which enables these shoppers to help themselves to groceries. Food stores are a prime market for the commercial refrigeration dealer in these critical times, for this type of equipment is "as vital to America as the food it protects".

SELLING THE 1951 MARKET

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ANSUL REFRIGERATION OIL

THE NEW . . . IMPROVED . . . ANSUL REFRIGERATION OIL . . . IS A RESULT OF THE PERSISTENT SEARCH BY ANSUL CHEMISTS AND REFRIGERATION TECHNICIANS FOR THE FINEST QUALITY REFRIGERATION OIL . . . AT ANY PRICE!

Since Ansul Refrigeration Oil was introduced in 1949 . . . its acceptance by refrigeration men has continued to expand. In only two short years Ansul is one of the leading refrigeration oils sold exclusively through Refrigeration Wholesalers.

The New . . . Improved Ansul Refrigeration Oil is now available at leading refrigeration wholesalers everywhere. It meets, or surpasses, every specification established by Ansul Research for a high quality refrigeration oil.

BUY IT AT THE NEW LOW PRICE. Use it for more dependable, trouble-free lubrication.

NOTE THESE IMPORTANT ANSUL FEATURES —

- a. *Lower floc point.
- b. *50% lower wax content.
- c. Moisture — ANSUL CONTROLLED minimum.
- d. *Lower pour point.
- e. Rigidly checked for high stability.
- f. *Lowest affinity for moisture.
- g. New low price.
- h. Available in quart, 1-gallon and 2-gallon cans; also in 5-gallon and 55-gallon steel containers.

**Improved features.*

ANSUL CHEMICAL COMPANY
 REFRIGERATION DIVISION, MARINETTE, WISCONSIN
 ANSUL SULFUR DIOXIDE, ANSUL METHYL CHLORIDE, ANSUL OIL, KINETIC "FREON" REFRIGERANTS
 ALSO MANUFACTURERS OF INDUSTRIAL CHEMICALS AND DRY CHEMICAL FIRE EXTINGUISHERS

SAVE Space, Shipping Costs, Installation Time

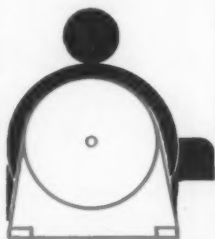
with G-E TRI-CLAD* Single-phase Capacitor Motors



Just right for machines and compressors

More compact—20 per cent lighter weight

Capacitor is now out of the way and protected from mechanical damage by installation in the base, which is cast integrally with the frame. Conduit box is eliminated by terminal board in end shield. Weight is reduced 15 to 20 per cent depending upon the rating.



Installation made easier and quicker

Simple wiring diagram inside cover plate on end shield shows how leads are connected. Motor may be reversed by changing capacitor lead on terminal board. Cast iron construction keeps motor in line, resists rust and corrosion. Standard motor (1 to 5 hp) is drip-proof.



In addition users will like the simplified transfer mechanism that provides smooth, reliable starting. The centrifugal mechanism has no rods or pins to wear; and the totally enclosed construction of the transfer switch keeps dust and dirt from the contacts. New long-life

ball bearings are factory greased, but may be easily relubricated when necessary. More information on types, sizes, and characteristics in Bulletin GEA-5401. Write today. General Electric Company, Schenectady 5, N. Y.

*Reg. Trademark of General Electric Co.

GENERAL  ELECTRIC

54-1

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and AIR CONDITIONING • APRIL, 1951

COLD-IN MERCHANDISERS

*offer the
opportunity of
a lifetime to
wide-awake
dealers*

CASH IN ON THE CURRENT HUGE DEMAND FOR REFRIGERATED DISPLAY CASES

*Add new profits to your business with the
COLD-IN line . . . finest built—competitively priced*

Not fancy words, not blue sky promises—but the best built, most dependable cabinets at the best value anywhere. That's the kind of sales talk that makes sense to food retailers! Add to that, the unbeatable COLD-IN guarantee and the built-in eye appeal and—you have the best sales clincher in the cabinet business!

We have several territories open that have tremendous potential—should yield five figure profits to go-getters. So, if you're the type, don't delay—write today and get the facts.

A COMPLETE LINE—ALL SIZES

Self Contained and Remote Types for the
Frozen Food • Dairy • Vegetable • Delicatessen • Bakery
Open Type—Self-Serve and Glass Front Models

- FIVE YEAR REFRIGERATION WARRANTY
- FIVE YEAR FOOD INSURANCE
- FAMOUS COLDIN GUARANTEE
- THERMOPANE EZE-SLIDE DOORS
- MODELS AVAILABLE WITHOUT SUPERSTRUCTURE

WRITE FOR FULL INFORMATION



YOUR KEY TO
BETTER REFRIGERATION

COLDIN CABINET CO. INC.

2800 Webster Ave., N. Y. 58, N. Y. • CYPRESS 5-3311



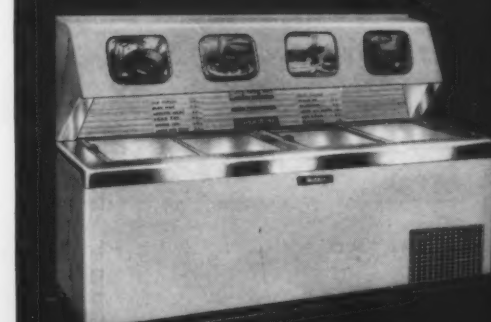
MODEL AGL-70. Tops in the field for a self-contained, self-service merchandiser. Gleaming white, sparkling mirrored, brilliant trim.



MODEL OPR-70. (Remote control). The more they see—the more you sell. Huge Thermopane "picture" window really shows and sells products.



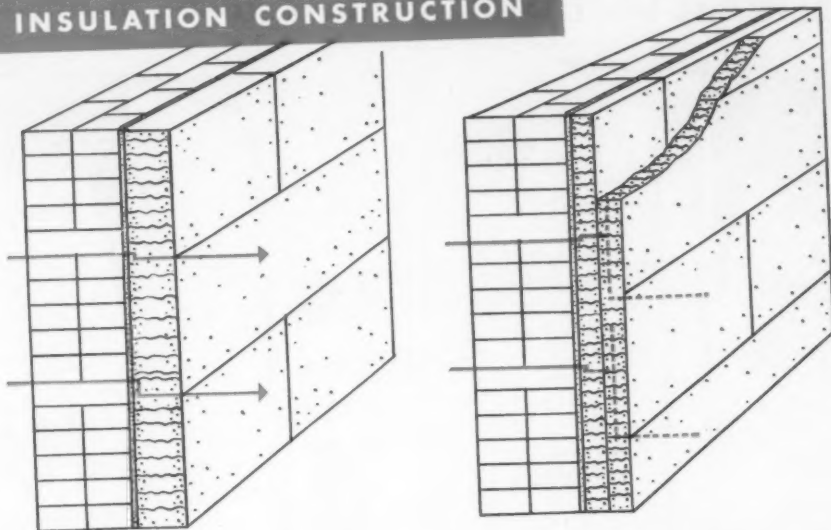
MODEL 16SCTD. Popular with retailers all over U.S.A. An eyecatcher that sings out and sells.



MODEL 21SCTD. A one-unit "Frozen Food Department" with 8 feet of sales power.

From our notebook of

INSULATION CONSTRUCTION



Two layers of insulation are better than one

Suppose you have a cold room that calls for a total of four inches of insulation. It is much better to install that insulation in two layers of two-inch thick material than in one layer four inches thick.

This method is recommended because it's difficult to apply insulation with absolutely airtight joints. Even the best mechanics are very likely to get one or two joints just a little out of square, leaving a space where air can get through. But with a second layer of insulation applied so that it will cover all the joints in the first layer, the air that starts to leak through is stopped.

While the leakage of air will lower the efficiency of a job somewhat, that isn't the heart of the problem. Air contains moisture and when it becomes chilled, it gives up its moisture. If that moisture is absorbed by the insulation, the efficiency of the job is seriously reduced. The compressor you installed runs all the time and almost invariably gets the blame. On freezer rooms this problem is even worse. The moisture will freeze and push the insulation right off the

wall, making it necessary to replace the entire job. Therefore, it is most important to use an insulation that is resistant to moisture penetration.

Because it's made entirely of cork, Armstrong's Corkboard is very moisture resistant. Cork is composed of tiny cells that resist moisture and fit together so perfectly that there are no spaces between them for moisture to get through. Also, Armstrong's Corkboard is resilient and easily cut to form clean, sharp edges so that you can make exceptionally tight joints. It's strong and can be used for partition walls without any supporting structural members. It will not shrink, swell, warp, or harbor vermin. Finishes bond securely to the surface of Armstrong's Corkboard. It's a material you can count on to give your customers years of trouble-free service.

You can get complete information on this efficient insulation by calling the Armstrong office nearest you or by writing directly to the Armstrong Cork Company, 5304 Concord Street, Lancaster, Pennsylvania.



ARMSTRONG CORK COMPANY

Makers of Armstrong's Corkboard and Cork Covering

Still This GENERAL CASE is the BIGGEST VALUE in AMERICA!

Unconditionally Guaranteed

The General Refrigerators Corp. places its 23-Year old reputation behind this guarantee: If, on installation of the MM4 Ful-Vision Case, you find that it does not perform to your complete satisfaction, we will take it back without question, paying all return freight costs and

REFUND YOUR MONEY IN FULL

WHY PAY MORE?

This General Case offers all the advantages of expensive cases, and guarantees performance at this unbeatable price . . .

MM4: 4 Ft. Ful-Vision Case*
\$249⁰⁰
F.O.B. N.Y.



Despite huge Increases in Material and Labor Costs . . . **\$249**
YOU CAN STILL BUY THIS CASE for

* Also Available in
5 ft. and 6 ft. sizes
and in
**SELF-CONTAINED
MODELS**
Ready for Plug-In

•
All at equally attractive
LOW PRICES

•
WIRE, PHONE OR WRITE →

All the features of Cases that Cost Twice the Price

- ✓ Triple thermopane high-strength glass . . . reinforced with breaker strip protection
- ✓ Finished in gleaming, durable baked enamel with smart chrome trim
- ✓ 3 spacious, Corrosion-proof aluminum shelves
- ✓ Latest fluorescent lighting insures highest see-ability
- ✓ Giant many-finned coils hooked-up in series with protective double baffle
- ✓ Smooth-working, handy, hinged rear door
- ✓ All models available with front sliding doors for self-service



Manufacturers Since 1928

GENERAL REFRIGERATORS CORP.

678 BROADWAY, NEW YORK 12, N. Y. • GRAMERCY 3-1222

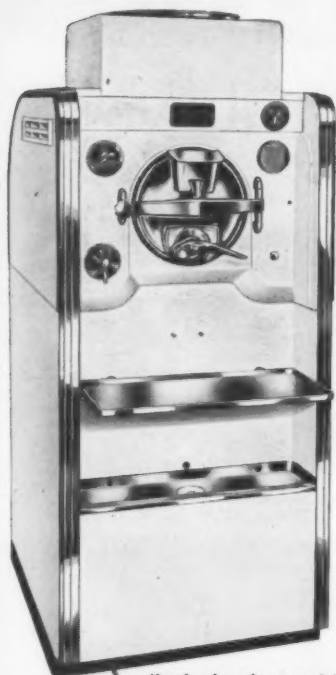
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APRIL, 1951 • COMMERCIAL REFRIGERATION

NEW

1951 MILLS ALL IN ONE FREEZERS

Designed and Priced for Faster Selling!



Here's a brand new model—The 1951 Mills Hopper Continuous Custard and Ice Cream Freezer (pumpless) is lower priced, simpler to operate and clean. 80% of your freezer buyers will want this Mills. This model is available with the new Draw-Off Custard Spigot.

NEW

Gravity-Fed Refrigerated Hopper Model. Lower price, simpler operation—wider distributor sales opportunities!

NEW

* Draw-Off Custard Spigot available on all 1951 Hopper and Pump models!

NEW

* Extra Heavy Drive Head. Greater strength for lower temperatures!

NEW

* Two horse-power Agitator Drive. Motor interchangeable with standard motor for extra low temperature custard operations.

*These are the only suggested changes offered by our nation-wide Distributor organization in 1951!



The 1951 Mills Pump-Fed Refrigerated Side Cabinet Model is designed especially for the large operator. It provides great convenience and assures a steady supply of custard or ice cream. The new sanitary Draw-Off Spigot shown serves custard with the utmost speed and ease.

MILLS A GREAT NAME THAT SELLS A GREAT LINE FOR YOU TO SELL

The Mills name on counter freezers has meant top quality for 21 years. Every prospect knows and respects that name. He may not be familiar with the new 1951 models and features, but when you say Mills, your selling job becomes easier.

Therefore, the Mills line is a great line for you to sell. There is a model for every location. New products are being developed to make the line even larger and more profitable. Watch for these developments.

New and improved features on the 1951 line make fine machines even finer, and provide distributors with carefully engineered and tested selling features. Sales come faster, profits grow bigger, and service becomes lower when you sell Mills All-In-One Freezers!

MILLS INDUSTRIES

INCORPORATED

4104 Fullerton Ave., Chicago 39, Illinois

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and AIR CONDITIONING • APRIL, 1951

Highly Profitable Territories are now Open for Reputable, Live-Wire Distributors

Due to present conditions, we have adjusted our sales plans, and distributorships are now open. Production quotas have been increased as a precaution against restrictions later. However, we expect an early season and suggest that potential distributors act at once.

We have a comprehensive sales plan backed up by a big national advertising campaign. Promotional material including mailers and free ad mats are available. Of course, Mills' very liberal discounts are expected to remain the same.

For more details, use the coupon. You will find Mills Freezer men the same reliable, helpful men that have been serving your industry for years. They will cooperate with you and your sales force.

MR. A. E. WILSON, SALES MANAGER, FREEZER DIVISION
Mills Industries, Inc., 4104 Fullerton Ave., Chicago 39, Ill.

Please send me ☐ 1951 literature or ☐ full information on profit potentials, and territories available in and around my area.

Name _____

Company Name _____

Address _____

City _____

Zone _____ State _____

for all water cooling use *Filtrine* —sell more condensing units

D O Rating" Orders are Vital...

All Federal Agencies . . . Air Force . . . Army . . . Navy . . . Marine Corps . . . know that Filtrine products meet government specifications.

COOLERS FOR MESS HALLS — CAFETERIAS

Sell your own condensing unit . . . with coolers backed by Filtrine's 40-year dependability. **1.** Government and general acceptance for high efficiency—dependability—20-year life construction. **2.** High capacity—super storage. **3.** Handsome exterior (all stainless steel or Duco with stainless trim). **4.** Equipped to suit with top and/or side shelves. **5.** Bubblers, glass-fillers, front, back or all sides. **6.** Can be "Taste-Master" equipped to banish chlorine and insure sparkling water.



MC-14-S
MC-43-S

MC-25-S
MC-40-S



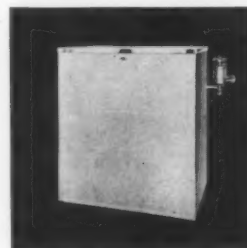
No. 4
"Taste-
Master"
Filter

COOLERS FOR X-RAY & PHOTOGRAPHY

Sell your own condensing unit . . . with these Filtrine coolers pre-approved by military and V. A. medical procurement officers, Signal Corps, Air Force, etc., for X-Ray darkroom and photo-lab installation. **1.** Dependable water of correct temperature for film processing. **2.** Large storage for heavy duty and emergency requirements. **3.** High efficiency, economy operation—20-year life construction. **4.** Floor mounted with stainless steel work-table top; also under-counter models. **5.** Filters (extra) prevent scratches and pinholed negatives.



MH-300-R M-90-R MA-40-R M-25-R M-14-R X-2-R M-10-R
MH-150-R M-75-R M-43-R M-7-R M-20-R
M-300-R M-40-R
M-150-R



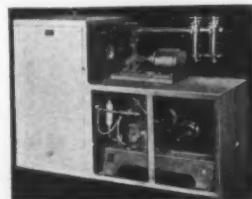
PH-7 PH-14 PH-25

REMOTE COOLERS FOR ALL USES

Sell your own condensing unit . . . with Filtrine coolers suitable for new and replacement installation everywhere: barracks, military depots, mills, schools, postoffices. **1.** Capacities 5-800 g.p.h.—storage 7-300 gallons. **2.** High efficiency—20-year life-span. **3.** Insulation—2" hydrolene-sealed corkboard. **4.** Filters, Rectifiers/Dechlorinators available for all sizes.

PACKAGED CIRCULATING CHILLED WATER SYSTEMS

Sell your own condensing unit . . . with complete Filtrine systems for circulating drinking water in offices, hospitals, industrial plants . . . for processing water as low as 34°. **1.** Completely packaged for streamlined engineering, quick installation. **2.** Capacities 5 to 400 g.p.h.—Storage 5 to 150 gallons. **3.** Equipped with heavy-duty pump. **4.** Your condensing unit factory installed. **5.** Insulation—2-inch hydrolene-sealed corkboard. **6.** 20-year life construction. **7.** Filter-Rectifier assembly (extra) to kill chlorine and keep water sparkling.



Typical "Packaged"
Circulating Chilled Water System

Get our new "HOW TO SELL D O JOBS."—write Dept. RF-3

Filtrine
HIGH EFFICIENCY

FILTRINE MANUFACTURING COMPANY · BROOKLYN 5 · N. Y.

"Water Coolers and Filters for 40 Years"

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APRIL, 1951 • COMMERCIAL REFRIGERATION

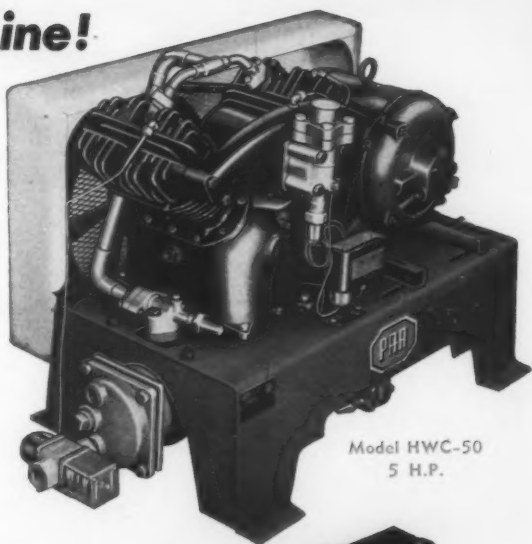
*By Comparison...You'll Buy
PAR and **PARMETIC**!*

PAR...

The Complete Quality Line!

PAR...

**conventional condensing
units, air-cooled $\frac{1}{8}$ to 3 h.p.,
water-cooled $\frac{1}{2}$ to 15 h.p.,
combination air and
water $\frac{1}{2}$ to 3 h.p.**



Model HWC-50
5 H.P.

PARMETIC...

**the ultra-quiet sealed
unit $\frac{1}{8}$ to $\frac{1}{3}$ h.p. that can
be serviced in the field!**



Model PM-O $\frac{1}{8}$ H.P.

BY COMPARISON—YOU'LL BUY PAR and PARMETIC



PAR AIR
COMPRESSORS



PAR
REFRIGERATION
COMPRESSORS



WRAP-O-MATIC
CANDY & COOKIE
WRAPPING
MACHINES

LYNCH

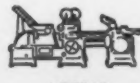
CORPORATION

PAR COMPRESSOR DIVISION

TOLEDO, OHIO



MORPAC
PAPER PACKAGING
MACHINES



MORPAC
BUTTER & OLEO
CARTONING
MACHINES



GLASS FORMING
MACHINES

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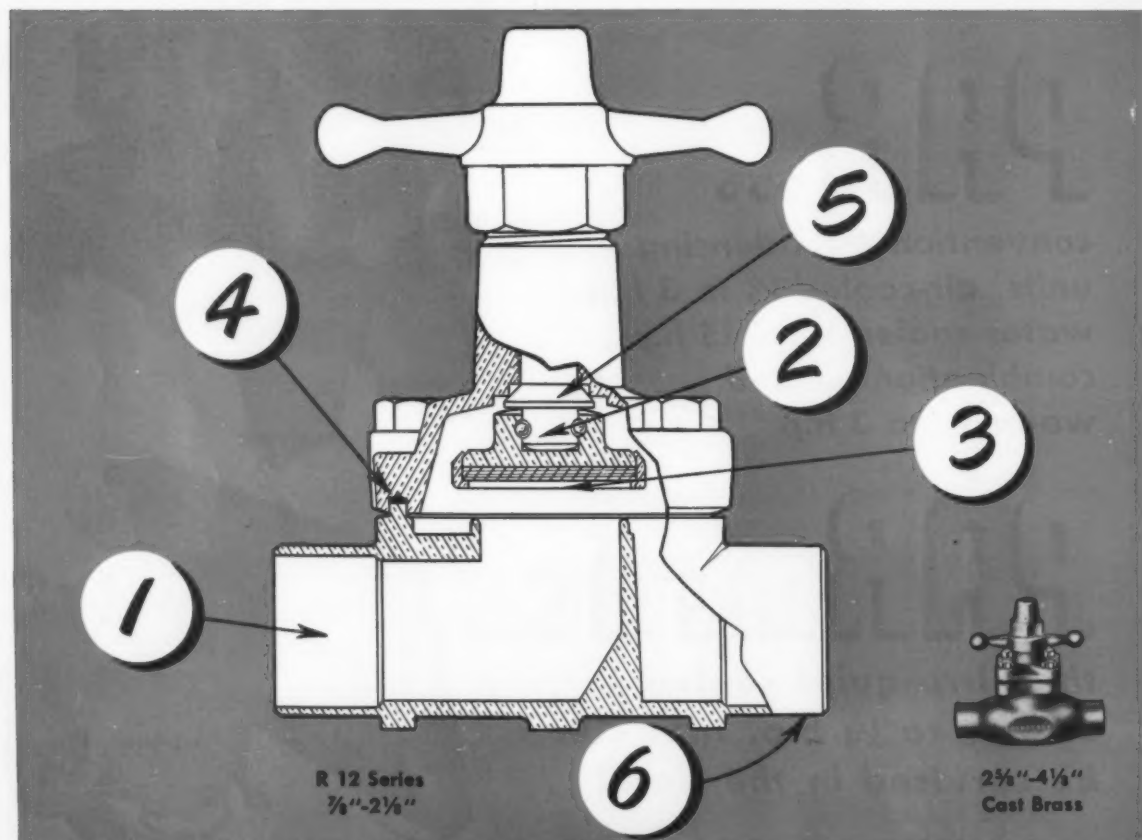
Check these "Extra Value" Features

of the

KEROTEST

Forged Brass
GLOBE VALVE

1. **FULL FLOW**—unrestricted interior design assures maximum volume and pressure performance.
2. **SELF-ADJUSTING**—abrasion and forced seating eliminated by self-compensating "floating" disc.
3. **POSITIVE SHUT-OFF**—quick seating disc seals flow without forcing—operates easily—gives extra-long service.
4. **LEAK-LOK BONNET SEAL**—exclusive Kerotest gasketing practice assures leak-proof bonnet joint.
5. **REPACKS IN USE**—positive back-seating permits repacking under full pressure with safety.
6. **TEMPERATURE-PROOF**—solid forged brass body withstands high temperature soldering—never develops porosity.



Always Extra Value at

No Extra Cost

SEE YOUR

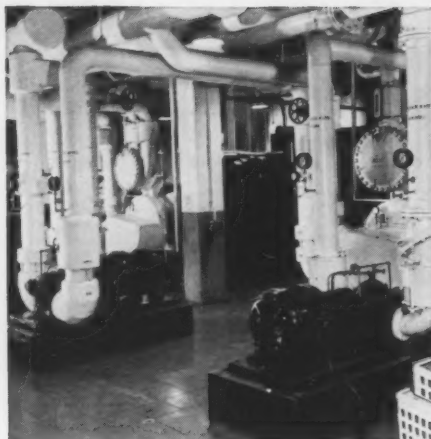
KEROTEST

WHOLESALE

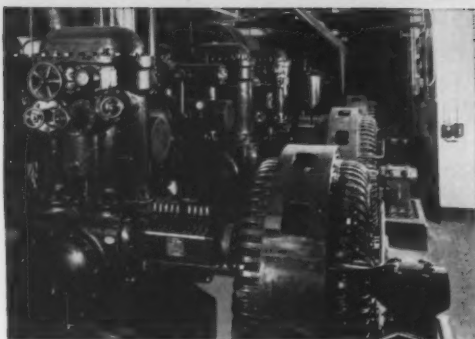
KEROTEST MANUFACTURING CO.

PITTSBURGH 22, PENNSYLVANIA

Circle No. 12 on Reader Service Card for more information



Carrier installation in Nemours Building



York installation
in Du Pont
Building



Among the "firsts" in air conditioned offices

It was a new idea when these two large buildings were completely air conditioned with "Freon" equipment

The installations in both the Du Pont Building (right above) and the Nemours Building (left) in Wilmington, Delaware, were pioneers in the field of air conditioning.

Among the earliest (1938) big office structures to be completely converted to air conditioning, the Du Pont Building, towering 14 stories, contains over 440,000 sq. ft. of rentable floor area. Its 1500 offices are fully modernized with comfort air conditioning the year round. A battery of four York Reciprocating Compressors, each of 300 tons capacity, using "Freon-12," provides safe, dependable comfort air conditioning at the rate of 443,000 cfm, serving thousands who work in the building.

Among the first (1935) to be designed and built around plans for air conditioning throughout, the Nemours Building—also a 14-story structure, with 421,000 sq. ft. of space—has concealed built-in air ducts and air distribution vents attractively and effectively located below windows in each of its 1500 offices. Complete air changes occur in every office five times an hour . . . providing a total of 387,000 cfm of conditioned air at 72°F. in winter, to 78°F. during warm summer months. A portion of the operating equipment (left above) includes two 400-ton Carrier Centrifugal Compressors using "Freon-11."

"Freon" refrigerants are ideal for large installations. They are safe

. . . nonflammable, nonexplosive, practically nontoxic. They have a reputation for continued economical and efficient operation in both large and small equipment. That is why . . . when you consider the installation of air conditioning systems . . . you should choose machines designed to use "Freon" refrigerants. E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Delaware.



Better Things for Better Living . . . through Chemistry



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**Our dealers are doing business
in a big way** WE'LL TELL YOU WHY...



BRUNNER
SINCE 1906

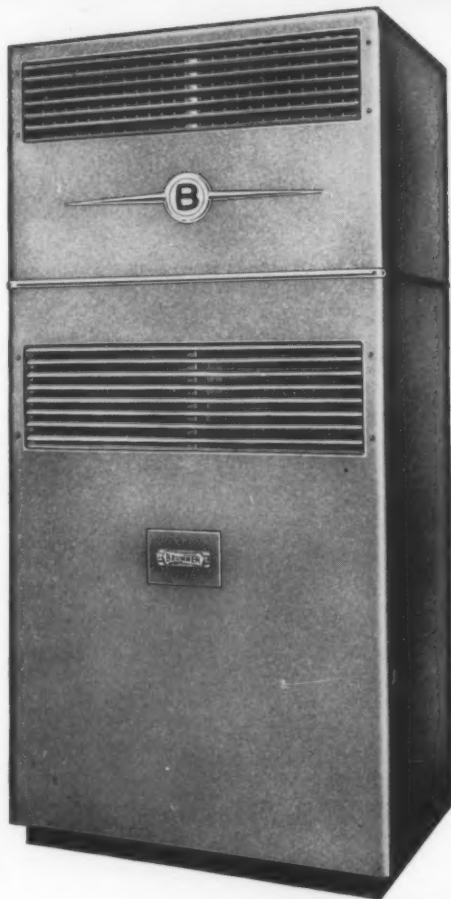
AIR CONDITIONING

First of all Brunner Air Conditioning Units, both self contained and remote, are Brunner built. We have absolute control over every point and every design feature that contributes to their maximum efficiency.

Buyers know what they want. Air conditioning is no longer new and in a highly competitive field prospects will choose carefully. Brunner units are built for long, dependable, care-free operation and these qualities are instantly recognized in comparison.

Brunner has customer acceptance. This name is no stranger to folks who buy refrigeration and air conditioning.

Brunner takes care of their dealers. Modern factories, skilled workmen and specialized production lines give you what you want and when you want it.



THERE'S MUCH MORE TO BE TOLD so fill in below and our factory sales engineer will stop by with all the facts of why you could well be sharing in this profitable business. We'll send 1951 literature along at once.

CUT OUT AND MAIL

Name _____

Company _____

Address _____

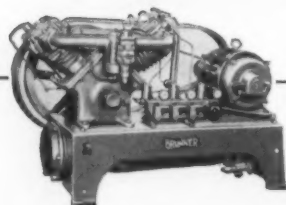
City and State _____

BRUNNER
SINCE 1906

AIR CONDITIONING

- Self Contained 3 HP. to 10 HP.
- Remote Type 3 HP. to 75 HP.

BRUNNER MANUFACTURING CO., Utica 1, New York, U. S. A.



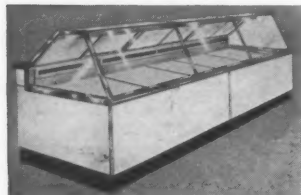
REFRIGERATION CONDENSING UNITS by
AIR AND WATER COOLED MODELS—a size
and type for every purpose... $\frac{1}{4}$ HP. TO 75 HP.

BRUNNER
SINCE 1906

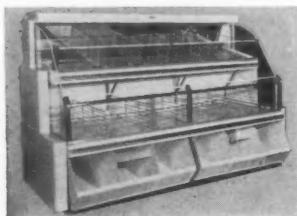
Circle No. 14 on Reader Service Card for more information



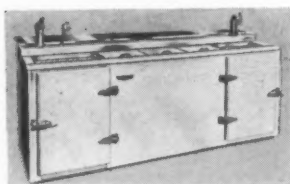
**EXCLUSIVE DESIGN
DISPLAY FREEZERS**



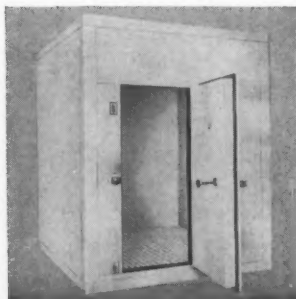
**ALL-GLASS & PORCELAIN
DISPLAY CASES**



**SELF-SERVICE DISPLAY
MERCHANDISERS**



**CLUB BARS AND
BEVERAGE COOLERS**



**ALUMINUM CLAD
SECTIONAL WALK-INS**

HOW does your line compare in money-making features with the FOGEL 10-point profit plan?

• FOGEL GIVES YOU—

one of the most complete lines in the commercial refrigeration industry. Meet every demand—sell every market.

• FOGEL GIVES YOU—

a line with plenty of sales features and exclusive product designs that add "sales punch" and give you a head-start on competition.

• FOGEL GIVES YOU—

a quality product that is built to give years of dependable operation . . . designed with sales appeal in mind.

• FOGEL GIVES YOU—

a "Special Order" Department at your service to build models for special application.

• FOGEL GIVES YOU—

a line that offers competitive list prices with liberal discounts that give you the profit margin you're entitled to.

• FOGEL GIVES YOU—

a line backed by over a half century of sales and production experience, with distribution throughout the world.

• FOGEL GIVES YOU—

a line that is supported and promoted by a sound and aggressive advertising campaign.

• FOGEL GIVES YOU—

Store Planning Engineers ready and able to help you convert a prospect into a satisfied customer.

• FOGEL GIVES YOU—

a franchise of sound and fair policy that protects your reputation, your efforts and your profits.

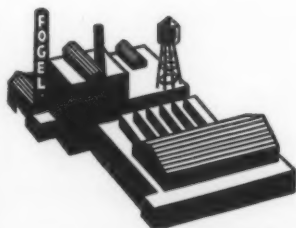
• FOGEL GIVES YOU—

not two or three, but ALL these essentials. And you must have them ALL before you'll have a line that "HAS WHAT IT TAKES" TO MAKE A PROFIT!

You, too CAN MAKE MORE MONEY
WITH THE FOGEL LINE!

"Sell the sizzle not the steak!" Sell the FOGEL line that offers you ALL the profit ingredients—not just an assembly of metal parts called a store fixture. Sell a service, not a price—and sell that service through FOGEL—a line that backs you up with ALL the product factors you need to make a profit.

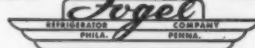
Your Territory May Still Be Open—
Write Today for Full Information



**Modern 4-Acre Plant
Geared to Mass Production**

Circle No. 15 on Reader Service Card for more information

CABLE "FOREFCO"



FOGEL

REFRIGERATOR COMPANY

Edom at Kennedy Sts., Philadelphia 37, Pa.

I WANT FACTS...

Please send me facts about an exclusive Fogel Dealer Franchise.

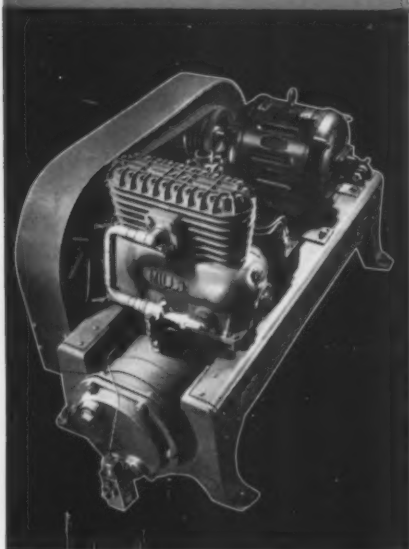
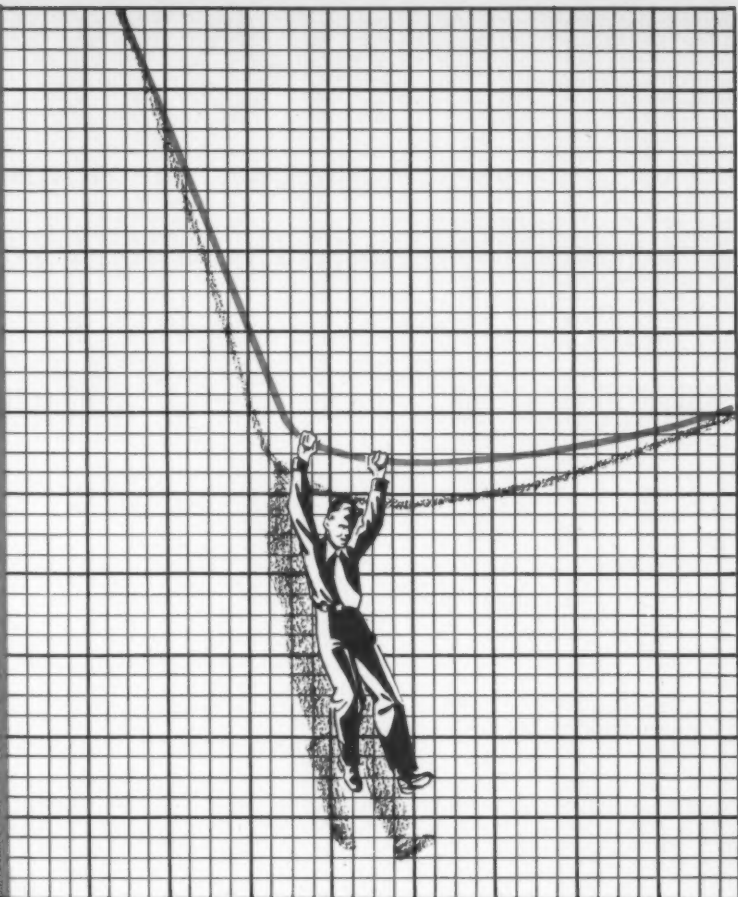
Name

Address

City State

2

WAYS TO CUT SERVICE COSTS



Write for new Catalog 204-1

A handy guide to help you
in Condensing Unit Selections



1 Be sure of the cooling or refrigeration application requirements.

2 Select the correct MILLS Double-Inspected Precision-Built Condensing Unit.

Preventive care includes checking every application for usual and unusual features, to arrive at the correct capacity condensing unit.

Then install a MILLS Unit that fits the job. They provide sustained maximum output per size and dollar. Quietness is a feature of correct design and precision manufacture. B.T.U. ratings are accurate and reliable. For the extra service that insures profits choose a Mills.

MILLS INDUSTRIES, Incorporated
4100 FULLERTON AVE., CHICAGO 39, ILLINOIS

MILLS

COMPRESSORS and CONDENSING UNITS

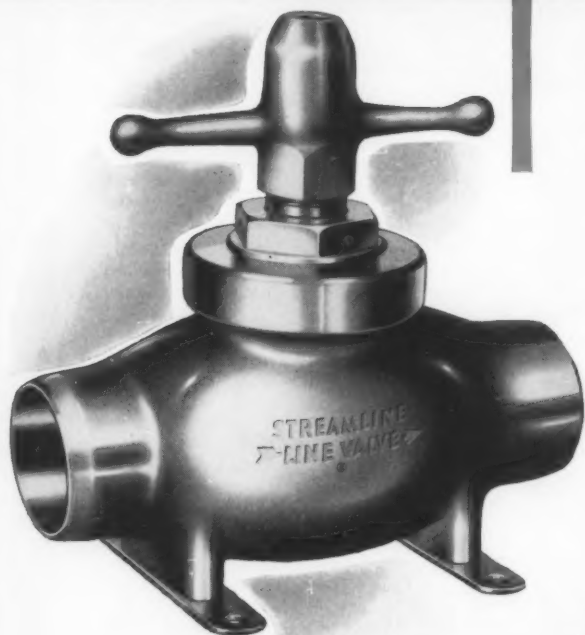
Circle No. 16 on Reader Service Card for more information

APRIL, 1951 • COMMERCIAL REFRIGERATION



*a good tip for
wise refrigeration men:*

**Always use
dependable quality built
MUELLER BRASS CO. parts.**

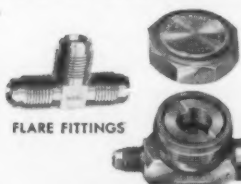


**8 good reasons why it pays
to stock, specify and install
Mueller Brass Co. STREAMLINE
Globe Type Valves.**

- Positive shut-off always assured with the amazing nylon stem seating disc.
- "O" ring provides a permanent, positive seal against any loss of refrigerant.
- No bolts — no flanges — no gaskets.
- New design eliminates excessive weight.
- Can be disassembled and ready to solder into the line in 10 seconds.
- Stem of corrosion resistant aluminum bronze.
- Highly polished red bronze body.
- Sizes $\frac{3}{8}$ " to $4\frac{1}{2}$ " O. D. Order from your refrigeration wholesaler.

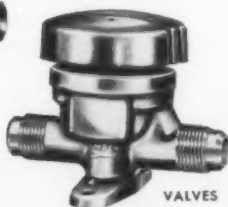


WROUGHT COPPER FITTINGS



FLARE FITTINGS

LIQUID INDICATORS



VALVES



DRIERS AND FILTERS

**Have these STREAMLINE products
on hand for every job where you
want dependable performance.**

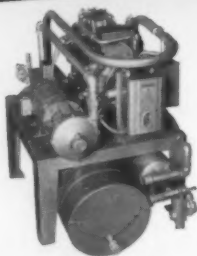


Write for catalog R-151
describing complete line
of STREAMLINE refrigeration
products.

STREAMLINE refrigeration
products are individual
and multiple packaged
for complete protection.

MUELLER BRASS CO. PORT HURON 12, MICHIGAN

Circle No. 17 on Reader Service Card for more information
and AIR CONDITIONING • APRIL, 1951



FLOW-COLD* LIQUID CHILLERS

Self-contained, compact and efficient Units, furnished completely wired and with refrigerant piping completed at the Factory. For Industrial applications or for Residential uses, ACME FLOW-COLD Units are simple and easy to install and will give lowest cost, most efficient cooling. Can be used for Heat Pump application where a suitable heat source is available.

Acme
products

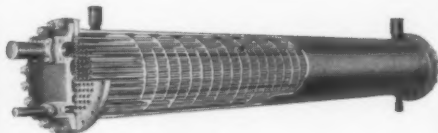
**tailored to fit
every kind of
LIQUID CHILLING or
WATER COOLING JOB**



UXR DRY-EX* WATER CHILLERS

For smaller loads, ACME has available the UX and the UXR type DRY-EX models, with both fixed and removable tube bundles. For applications involving brine, glycols, liquid sub-cooling or inter-stage condensing, consult factory for additional information and recommendations.

In selecting the most efficient equipment to perform a specific job of refrigeration, your task is greatly simplified when you specify "ACME" — for the ACME line is complete enough to give you a suitable ACME Product, for every kind of Residential or Industrial chilling or liquid cooling requirement. And you are certain of getting the most practical, maintenance-free, low cost operation, for ACME equipment has been preferred in the heavy Refrigeration Industry for more than 30 years.



ACME DRY-EX* CHILLERS

For brine, alcohol, water or any low viscosity fluids. There are more than 700 combinations of refrigerant heads, baffle spacings and tube lengths. The most efficient direct expansion, shell and tube units offered to the Refrigeration Industry in the last 10 years.

ACME ALSO MANUFACTURES: EVAPORATIVE CONDENSERS • FREON CONDENSERS • AMMONIA CONDENSERS • SHELL AND COIL CONDENSERS • SHELL AND TUBE CONDENSERS • FIN COILS • PIPE COILS • COOLING TOWERS • OIL SEPARATORS • LIQUID RECEIVERS • HEAT EXCHANGERS

HI-PEAK* WATER CHILLERS

Are offered in seven standard sizes, for intermittent or continuous operation. HI-PEAK Water Coolers have large storage capacity and are galvanized after fabrication. Factory Insulation optional. Equally efficient for use with Freon or Ammonia, require a separate Compressor, as it is not a self-contained cooling unit.



Acme INDUSTRIES, INC. JACKSON, MICH. U.S.A.

CONTINUOUSLY SERVING THE REFRIGERATION INDUSTRY SINCE 1919.
Circle No. 18 on Reader Service Card for more information

APRIL, 1951 • COMMERCIAL REFRIGERATION

NOW...

AN EVEN MORE LIBERAL 5-YEAR PROTECTION PLAN FOR SERVEL SUPERMETRIC SEALED CONDENSING UNITS

Here's the kind of profit news you've been waiting for. Servel's FIVE-YEAR Protection Plan has been extended beyond the fractional hermetic line to include the new *steel-case* 1 HP models.

Dealers and service engineers can now look to even bigger sales records in 1951 . . . more money-making opportunities. Prospects are easy to sell when they are offered a genuine FIVE-YEAR warranty to back up their refrigeration investment. Servel's new, liberal protection plan is available with all Servel Supermetric sizes from the smallest models right up through the new *steel-case* 1 HP line.

Manufacturers are enthusiastic about Servel's new warranty policy because it means distribu-

tion can be further broadened. It offers the assurance that users of fixtures "Powered by Servel" will enjoy trouble-free, economical performance of their condensing unit equipment. Manufacturers are relieved of field service problems.

Servel's nation-wide network of authorized parts suppliers carry ample stocks of all necessary replacement or exchange requirements. Dealers and service engineers deal directly with these conveniently located parts depots. Servel's new warranty plan requires no cash deposit on any defective parts exchange. User satisfaction and goodwill can now be fully protected. Where installations involve larger condensing unit models, Servel offers a warranty that provides replacement parts for a full year.

FOR COMPLETE INFORMATION . . .
WIRE, WRITE OR MAIL THIS COUPON

Servel

SUPERMETRIC

Models for every electric refrigeration
and air-conditioning use . . . 1/5 to 5 H.P.

Circle No. 19 on Reader Service Card for more information
and AIR CONDITIONING • APRIL, 1951

SERVEL, INC.
ELECTRIC REFRIGERATION DIVISION
DEPT. C-4 EVANSVILLE 20, INDIANA

NAME (personal) _____

TITLE _____

COMPANY _____

ADDRESS _____ ZONE _____ STATE _____

SPORLAN

Catch-All FILTER-DRIER

with Tri-Dimensional
Filtering Area...

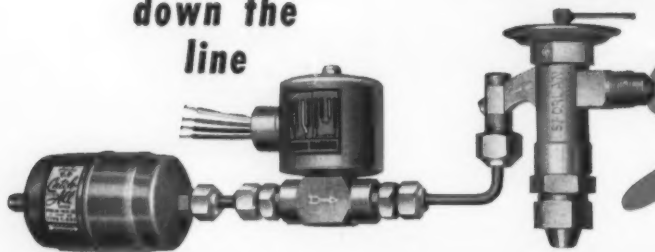
*does it
again!*



Sporlan manufactures

SOLENOID VALVES • SOLENOID PILOT CONTROLS
MODULATING PILOT CONTROLS • REFRIGERANT DISTRIBUTORS
STRAINERS • CATCH-ALLS
and the *Only* THERMOSTATIC EXPANSION VALVES
with FLOWMASTER ELEMENTS and SELECTIVE CHARGES

for PEAK PERFORMANCE
on all installations
... buy Sporlan
right
down the
line



WHOLESALE...SCHULTZ THE BUTCHER'S GOT ME DOWN!
EVERY MONTH I CLEAN UP HIS WALK-IN JOB...

-- AND -- BOOM -- HE
CALLS ME
AGAIN!
IF IT'S NOT
DIRT--IT'S
MOISTURE--
AND "CALL-
BACKS" COST
ME MONEY!



THAT SOUNDS
LIKE A JOB FOR THE NEW

SPORLAN
410 SERIES
CATCH-ALL
FILTER-DRIER

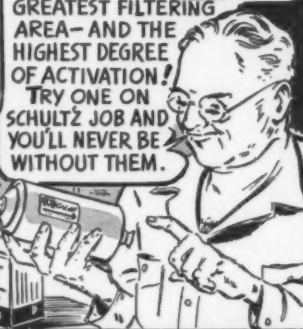
PETE!



...BUT I'VE PRACTICALLY
TRIED 'EM ALL! IS THIS
SPORLAN
CATCH-ALL
FILTER-DRIER
ANY
DIFFERENT
?



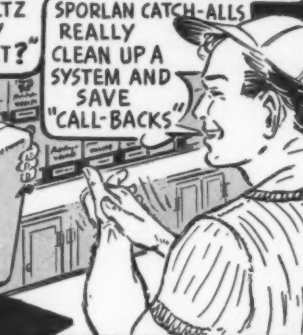
PETE--MY BOY--ONLY THE
SPORLAN CATCH-ALL FILTER-
DRIER OFFERS BOTH THE
GREATEST FILTERING
AREA--AND THE
HIGHEST DEGREE
OF ACTIVATION!
TRY ONE ON
SCHULTZ' JOB AND
YOU'LL NEVER BE
WITHOUT THEM.



MONTHS
LATER... HERE'S YOUR SPORLAN
CATCH-ALL ORDER, PETE--
SAY THAT REMINDS ME--DID YOU
AND OLD SCHULTZ
EVER "BURY
THE HATCHET?"



I'LL SAY--WE'RE PALS
NOW--AND THANKS FOR
TIPPING ME OFF! THOSE
SPORLAN CATCH-ALLS
REALLY
CLEAN UP A
SYSTEM AND
SAVE
"CALL-BACKS"



Sporlan
VALVE COMPANY

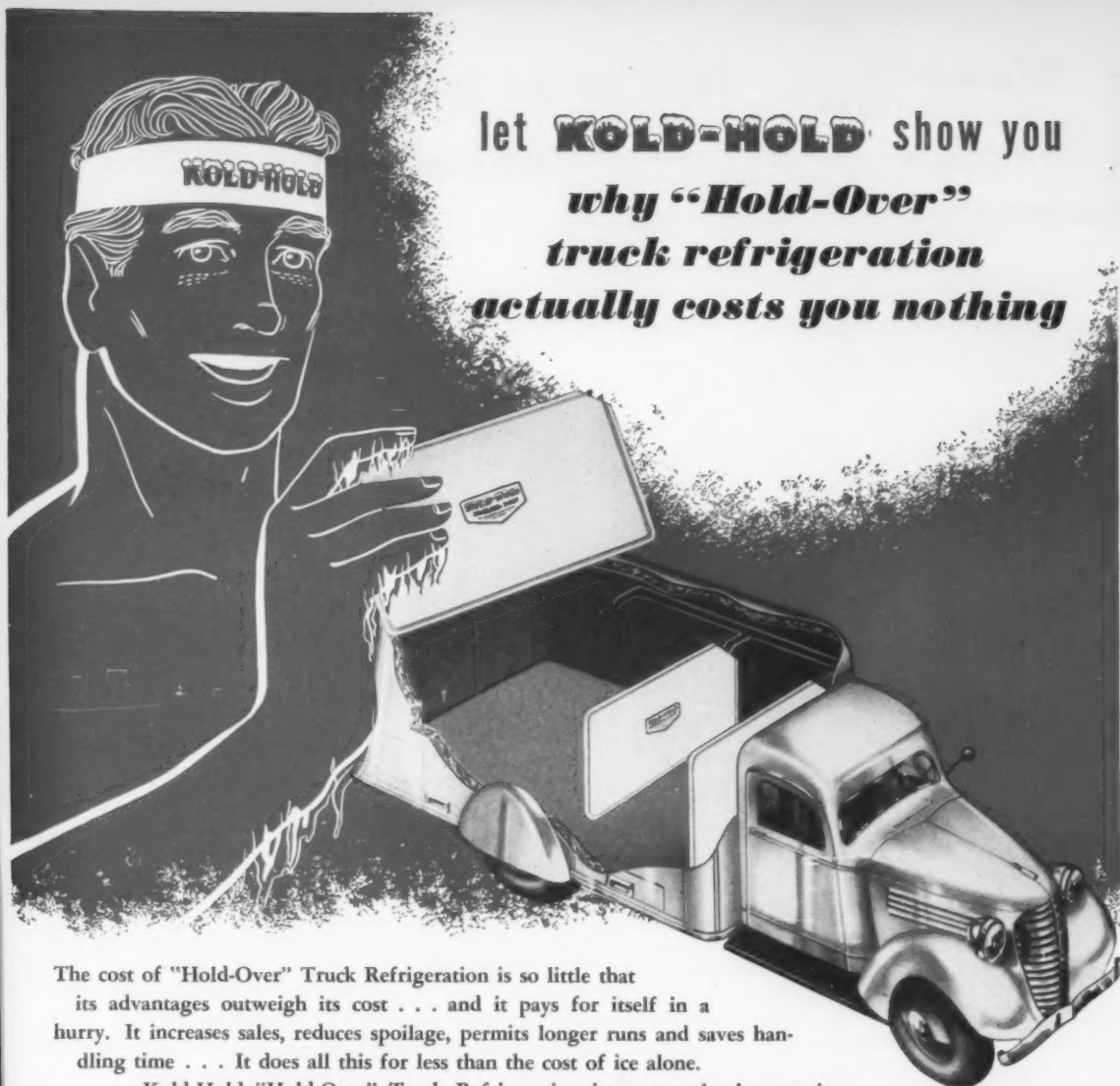
SPORLAN



7525 SUSSEX AVENUE • SAINT LOUIS 17, MISSOURI

Circle No. 20 on Reader Service Card for more information

APRIL, 1951 • COMMERCIAL REFRIGERATION



let **KOLD-HOLD** show you
why "Hold-Over"
truck refrigeration
actually costs you nothing

The cost of "Hold-Over" Truck Refrigeration is so little that its advantages outweigh its cost . . . and it pays for itself in a hurry. It increases sales, reduces spoilage, permits longer runs and saves handling time . . . It does all this for less than the cost of ice alone.

Kold-Hold "Hold-Over" Truck Refrigeration increases sales because it keeps your truck contents cold, clean, dry and odorless, and improves their sales appeal. It reduces spoilage because the temperature of the truck can be predetermined and maintained throughout the longest day's hauls. And when the truck returns from its trip, undelivered loads can be left in the truck to save overtime handling.

"Hold-Over" Truck Plates reduce the cost of marketing perishable foods. Operating either off the existing plant cooling system or with condensing unit mounted on truck, they protect your products in transit . . . for less than 10 cents a day!

So why pay a premium for inadequate refrigeration when you can refrigerate your trucks at a profit, using "Hold-Over" Truck Plates. Write for full details today.

KOLD-HOLD

protects every step of the way

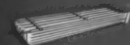


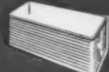
PLATE BANKS



PLATE STANDS



PREFABRICATED LINERS



SERPENTINE EVAPORATORS



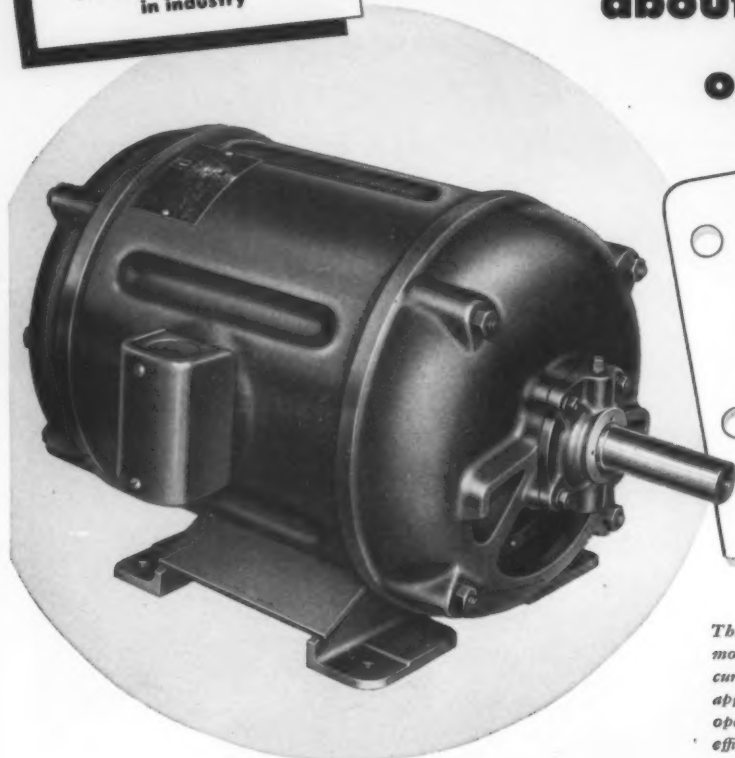
"HOLD-OVER" PLATES

KOLD-HOLD MANUFACTURING COMPANY 503 E. Hazel St., Lansing 4, Michigan

Circle No. 21 on Reader Service Card for more information
 and **AIR CONDITIONING • APRIL, 1951**

Wagner
ELECTRIC MOTORS
... the choice of leaders
in industry

it *pays* to be particular
about your choice
of motors...



*the Wagner
type RA Motor offers
the most simplified
design to provide
Repulsion-start...
Induction Run*

The Wagner Type RA Motor starts as a repulsion motor with high torque but with extremely low starting current and switches to an induction motor while approaching rated speed to assure a constant high operating speed, even under overload, and a flat efficiency curve over a wide operating range.

The Wagner repulsion-start induction motor is truly industry's general purpose single-phase motor, for both fractional horsepower and integral horsepower applications. It is especially suitable for driving machines having high inertia or excessive friction at starting because of its ability to start heavy loads with low starting current. This feature is most important in the larger fractional

and in integral horsepower ratings.

This versatile motor is economical to maintain, requires only minimum servicing, is free from vibration and noise, and gives years of reliable service.

Build good will for your product by standardizing on Wagner Motors. There's a motor to fit your *exact* needs in Wagner's complete line. Bulletin MU-185 gives full information.

Wagner
Electric Corporation

1891 **WE** 1951

WAGNER ELECTRIC CORPORATION

6442 Plymouth Ave., St. Louis 14, Mo., U.S.A.

ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES
AUTOMOTIVE BRAKE SYSTEMS - AIR AND HYDRAULIC

BRANCHES IN 31 PRINCIPAL CITIES

Circle No. 22 on Reader Service Card for more information

APRIL, 1951 • COMMERCIAL REFRIGERATION

HOW TO SELL REFRIGERATION TO THE PROSPECT WHO SAYS

I NEED NEW
EQUIPMENT
BUT I DON'T HAVE
THE MONEY
FOR IT

He is in the habit of
paying his suppliers daily.

As a result, at the
end of the month there
is not enough left
to pay large down
payments and lump sum
monthly payments.

Your Answer Is THE METER PLAN OF DAILY SAVINGS



Meter-Matic DM6 Meter

- LOW IN PRICE
- FULLY GUARANTEED
- IMMEDIATE DELIVERY

Your Customer
Deposits
Just a Few
Quarters
a Day.



MAIL THIS COUPON TODAY

INTERNATIONAL REGISTER CO.
2626 W. Washington Blvd.
Chicago 12, Illinois

INTERNATIONAL REGISTER CO.
2626 W. Washington Blvd.
Chicago 12, Ill.

Dept. 41-M

Please send me FREE of charge:

- ☐ Meter Catalog. ☐ Meter Plan Folder.
☐ List of Banks Handling Meter Plan Paper.
☐ 1951 Survey—Dealer Use of the Meter Plan.

Company
My Name
Street
City..... Zone..... State.....



TYLER REFRIGERATED CASES

**speed sales . . . prevent food spoilage losses . . .
save time of clerks and customers . . . save dollars!**

Today's retail food store is a marvel of efficiency, with wide-open Tyler self-service cases making it possible for a constant parade of customers to help themselves in a hurry! Creating tremendous savings! Moving nourishing food in huge volume! Refrigeration at the point of sale is an essential part of this great American distribution system—and Tyler engineering ingenuity has played an important role in its development.

This 28-page illustrated booklet gives complete data on Tyler facilities—part of which will be available for defense work.



**FOR DEFENSE
PRODUCTION
FACILITIES**
—wire, phone or write
Tyler Contract Dept.
today!

TYLER

FLEXIBLE PRODUCTION FACILITIES

Tyler Fixture Corp., Contract Dept. R1-4, Niles, Michigan



Niles, Michigan



Cobleskill, N. Y.



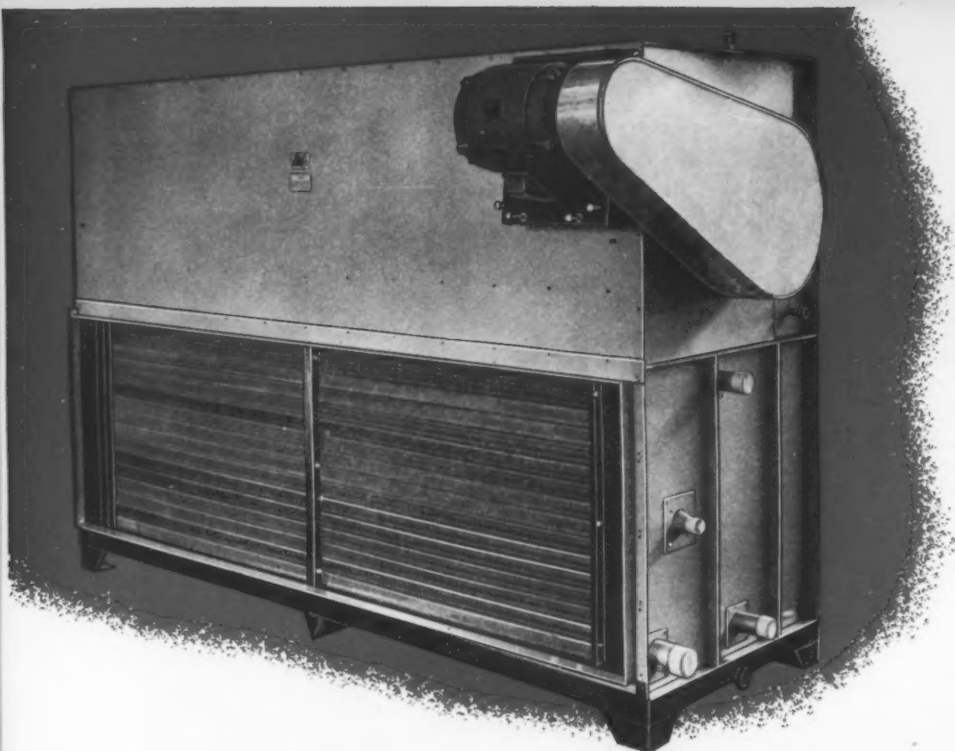
Waxahachie, Texas

Circle No. 24 on Reader Service Card for more information

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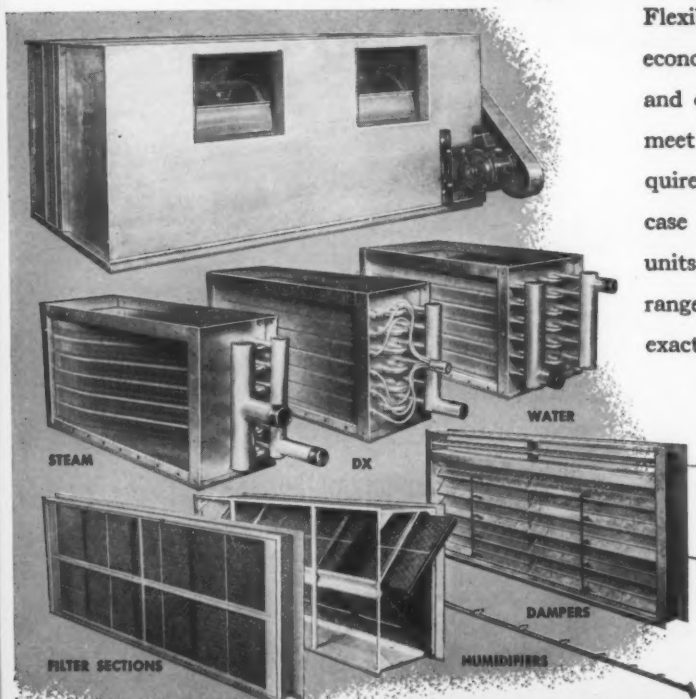
**VERTICAL
AIR HANDLING UNIT**
Illustrated (left)
available with face
and by-pass dampers,
choice of either flat
or V-type filter sec-
tions with throw-
away or cleanable
type filters, humidifi-
ers, and wide variety
of coil selections.

Air Handling **UNITS BY BUSH**



Flexibility of component parts assures efficient, economical delivery of filtered air . . . cooled and dehumidified or heated and humidified to meet the all-year-'round air conditioning requirements of products or personnel. Eight case sizes, in either floor or ceiling mounted units, are available . . . with an overlapping range of air deliveries to meet specifically the exact demands of any application.

Buy the Best — and the Best is Bush



BUSH MANUFACTURING CO., WEST HARTFORD, CONN.

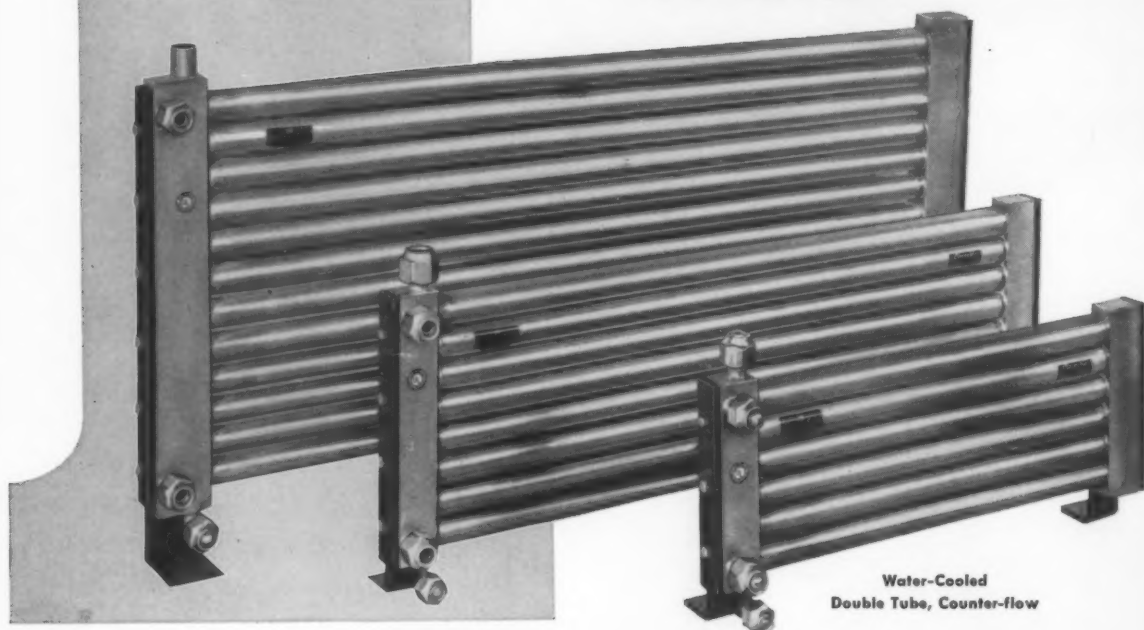
Circle No. 25 on Reader Service Card for more information
and **AIR CONDITIONING • APRIL, 1951**

No. 1 Requirement—in any size unit

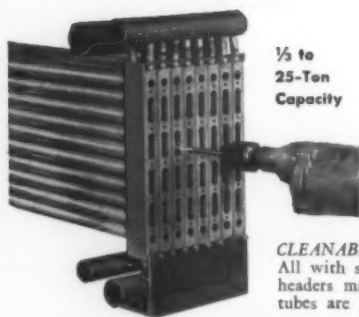
an

HM

CLEANABLE CONDENSER



Water-Cooled
Double Tube, Counter-flow



$\frac{1}{2}$ to
25-Ton
Capacity

Regardless of whose condensing unit you buy—and regardless of its size—your first “must” is to insist that it have a **CLEANABLE** (water-cooled) condenser to help you maintain new-unit efficiency indefinitely. When you realize that use of a simple spiral tool, doing a thorough mechanical cleaning job, can always restore copper-water surfaces to their original heat-exchange efficiencies, you won't settle for anything less than a cleanable condenser. And especially so now since most major manufacturers recognize the demand for “Cleanable”, and are equipping their units accordingly. Remember too, you can now count on surprisingly low initial cost that is made possible by Halstead & Mitchell's tremendous high productive capacity.

CLEANABLE—in all size capacities. All with seamless copper tubes, brass headers machined and brazed. Water tubes are accessible from either end.



Halstead & Mitchell

Wholesalers in Principal Cities—Write for descriptive literature

OFFICES: BESSEMER BUILDING • PITTSBURGH 22, PA.

Circle No. 26 on Reader Service Card for more information

APRIL, 1951 • COMMERCIAL REFRIGERATION

"STEADY VOLUME...LOTS OF REPEAT BUSINESS" keeps us happy with our SUPER-COLD FRANCHISE"



Nat Silverstone



Everett H. Stahl

These are the words of Nat Silverstone and Everett H. Stahl of the Silver-Stahl Corp., Super-Cold distributors for Northern California.

They enjoy steady volume at Silver-Stahl's—a volume which stems from alert sales direction and highly saleable equipment.

Corporation principals are personally interested in the success of every salesman. Ranging from one end of the territory to the other, Nat Silverstone constantly injects enthusiasm into his men by demonstrating the superior features of Super-Cold refrigeration, and how these qualities make money for the purchaser. He's always ready to talk about the advantages of Super-Cold, showing how Super-Cold refrigerated cases cut trimming and spoilage losses, provide better display, and permit a wider variety of merchandise to attract new customers.

Teammate Everett Stahl backs the sales organization with deft business management and able follow-through to assure prompt deliveries. His congenial personality has made many friends for Silver-Stahl and Super-Cold. Both men feel that "customer satisfaction and repeat business of Super-Cold equipment have been outstanding."

Silver-Stahl's rise since 1947 to one of the largest volume Super-Cold distributors demonstrates the wide possibilities for profit with a Super-Cold franchise.



Recent installation of Super-Cold's SUPER MERCHANDISER, open-well display case.



Super-Cold service meat cases installed in a San Francisco super-market.



New SUPER SALES MASTER, rear-loading, self-service meat and delicatessen cases.



Silver-Stahl showroom, 298 7th St., San Francisco, Super-Cold's Northern California distributor.



Reconditioning plant and showroom of Silver-Stahl Corp., Oakland, Calif.



Sales force and display office of Silver-Stahl Corp., San Jose, Calif.

THE SUPER-COLD CORPORATION

A Leader in Refrigeration for over 25 Years



SUPER-COLD

Refrigeration

COMPLETE FOOD STORE REFRIGERATION UNDER ONE GREAT NAME

The Super-Cold Corporation
1020 E. 59th St., Los Angeles 54, Calif.

Gentlemen:

Please send me details on available Super-Cold franchises.

Name

Address

City State

Circle No. 27 on Reader Service Card for more information
and AIR CONDITIONING • APRIL, 1951

DEFROST AUTOMATICALLY

35° F

24° F

in this refrigeration range
and higher

with **TP***

T-P* ... *Time-Pressure defrosting ... is *needed and wanted* by every owner of meat display cases, self-serve cases, reach-in boxes and other refrigeration equipment maintaining temperatures from approximately 24° to 35° F. and higher.

And no wonder! T-P* *automatically and correctly varies* the defrost period as required ... no more annoying problems to determine length of shut-down time which fluctuates considerably with load and weather conditions. Yes ... T-P* *avoids unnecessary* shut-down time by stopping compressor *only* long enough to defrost ... **NO LONGER** ... and does it *automatically!*

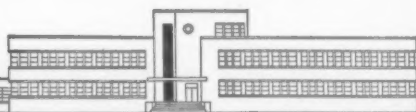
The operation of the PENN Series 325 Time-Pressure Defroster is simple. At predetermined intervals a synchronous timer stops the compressor. Then, when defrosting is completed, rising back pressure in the system automatically starts the refrigeration cycle.

Simple, compact and convenient to mount and wire, the Series 325 is easy to sell. Learn how you, too, can cash in on extra sales and profits ... ask your wholesaler or write **Penn Electric Switch Co., Goshen, Indiana**. Export Division: 13 E. 40th Street, New York 16, N. Y., U.S.A. In Canada: Penn Controls Limited, Toronto, Ontario.



Interior (above) and exterior (right) of Type 325. Timer can be set for one to eight "off periods" every 24 hours. Length of "off period" varies automatically with the frost condition of the coil.

PENN



AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, PUMPS, AIR COMPRESSORS, ENGINES, GAS RANGES

Circle No. 28 on Reader Service Card for more information

APRIL, 1951 • COMMERCIAL REFRIGERATION



LOOKING FOR CASH CUSTOMERS? Then take a trip out into the country to contact the farmers in your area. According to a recent analysis developed by *Capper's Farmer* magazine, farmers are more likely than other groups to lay "all the cash on the barrel head" when purchasing any type of durable goods. Personal interviews with 174 farm buyers and 1232 non-farm buyers of durable goods showed that 66% of the farm buyers paid full cash, while only 47% of the buyers in the 12 largest metropolitan areas and 38% of the buyers in other cities of 50,000 or more population paid full cash at the time of purchase.

TWO HIGHEST AWARDS in General Electric Co.'s employee suggestion program for 1950 were won by workers in the company's Refrigerator Division in Erie, Pa. John R. Davis took top honors of \$2,185 for a suggestion which eliminated a sub-assembly operation in the manufacture of refrigerators. Philip W. Robinson won the second highest award of \$2,165 for outlining a revision of assembly operations.

NOW IT'S REFRIGERATED STRAWS! For the benefit of those who like their beverages cold—but undiluted—an enterprising manufacturer now is producing a refrigerated straw. The "Ice Jet Sipper", as it is known, consists of two sections of aluminum tube, one within the other, enclosing a small amount of water which is kept from leaking by cork seals at top and bottom. Mouth-piece and tip are made of plastic. Prior to use, these new-fangled straws are placed in the freezing compartment of the refrigerator, where the water within the sipper is soon frozen. Beverages then sipped through Ice Jets are cooled as they pass through the chilled tube.

AIR CONDITIONING ALA CARTE might well be the term used to describe the chilled water air conditioning system being installed to provide tenants of the Empire State Building with cooling. The system will cost \$1,500,000 and will extend to the building's 86th floor. Tenants need "buy" air conditioning only if they want it. The chilled water will be available, and all they have to do is to furnish the units needed to convert the chilled water to conditioned air. Only first and second floor tenants, however, will be able to make use of the service during the summer of 1951. The cooling plant, designed and built by York, will ultimately develop 3500 tons of refrigeration, and require 4500 hp to operate its heavy mechanical equipment.

PANEL COOLING can be used, even at temperatures of 70 and 80 F, to enhance the thermal storage of buildings, to directly intercept radiant energy (as from lights), as a means of cooling a room, and to affect the comfort relationship by lowering the mean radiant temperature, in the opinion of P. B. Gordon, chairman of the ASHVE technical advisory committee on panel heating and cooling. He expresses the belief that panel cooling, by itself, will never take over the entire job of cooling a building, however. Its greatest advantage, he feels, will be to reduce cooling loads on air conditioning systems, thus reducing equipment and duct sizes. The savings, he points out, probably would not justify the cost of the cooling panels, but where heating panels are specified, the use of the same panels for cooling would seem feasible.

SELLING THE 1951 MARKETS. This issue, covering the Food Store field, is the first of three special issues of **COMMERCIAL REFRIGERATION** which will emphasize "the 1951 story" as it affects the sales and merchandising of commercial refrigeration and air conditioning equipment. Where are your best opportunities for equipment sales? How can you make the most of these opportunities? In these special issues, we'll try to give you at least some of the answers. This month, for instance, we emphasize the opportunities you have to modernize food markets by replacing outmoded, inefficient equipment and improving display and storage facilities, and the advantages there are in merchandising a complete food store equipment line. Next month's issue will feature the important role refrigeration and air conditioning play in industrial production. Don't miss it.



AND WE'LL MAKE SURE
THE AIR-CONDITIONING
IS EQUIPPED WITH
HONEYWELL CONTROLS!

We doubt that the three bears know Honeywell so well.

But practically everyone else does — both the public
and the trade!

And what they know is that there is no better
guarantee of dependable, trouble-free operation than
the Honeywell name on automatic controls for
air conditioning and refrigeration.

So make your first choice Honeywell Controls — the first
choice of architects, builders and consumers. For
full information, address: Minneapolis-Honeywell,
Dept. CR-4-43, Minneapolis 8, Minnesota.
In Canada: Toronto 17, Ontario.

MINNEAPOLIS
Honeywell

First in Controls

A Food Store Essential

By Mrs. R. M. Kiefer

Secretary-Manager, National Association of Retail Grocers

IN PEACE OR IN WAR, good nutritious food is essential for healthy bodies and healthy minds. Only through a strong and well-fed America will we be able to maintain a firm and unwavering stand for the principles of freedom and peace.

The independent retail grocers of the nation are proud of their part in the distribution of wholesome foods to more than 100,000,000 of their fellow Americans. They have established throughout the country nearly half a million well-stocked, modern, healthful stores to bring the abundance of our farm production into homes in every city, town and village.

Of the most vital importance in their successful operation is adequate refrigeration. No retail food store could do a successful business today without refrigeration equipment in which to preserve and display meats, fresh fruits, vegetables, dairy products, frozen foods, and other commodities.

Without refrigeration, no retailer could provide the perishables his customers demand daily.

Can you imagine today's housewife buying bacon hanging from the ceiling of the corner grocery store? In 1951 that is unthinkable! The modern customer expects bacon wrapped in cellophane and displayed in a spotless, bright, cool refrigerated case. She also expects fresh vegetables and fruits every day in the year, kept fresh and appetizing in new and modern refrigerated equipment.

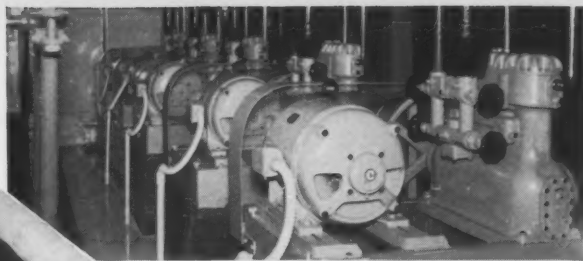
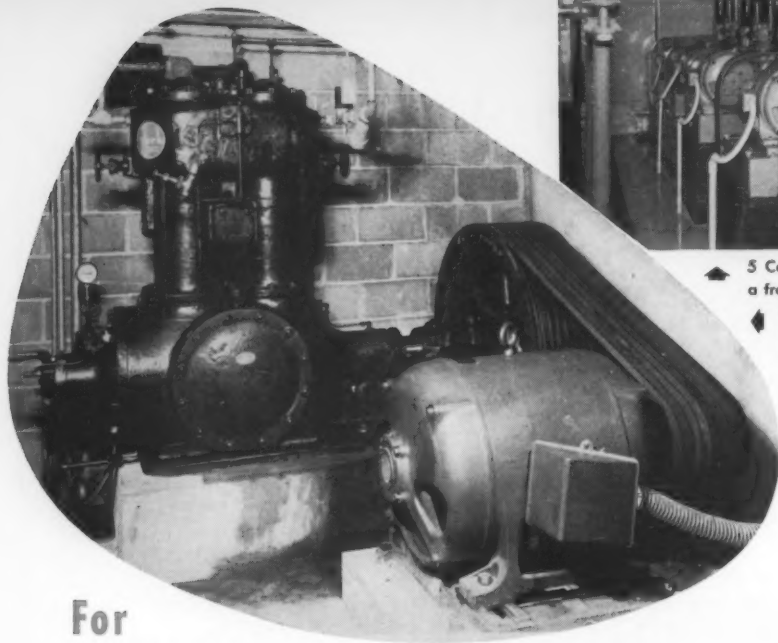
A recent survey made by the National Association of Retail Grocers shows the great importance with which the independent retailer regards refrigeration equipment:

Sixty-nine out of every 100 grocers participating in the survey plan to purchase new equipment as a necessary expense of doing business in 1951. The items they consider essential and the percentage of grocers planning to purchase them are: frozen food cases, 20%; refrigerated vegetable display cases, 20%, refrigerated dairy equipment, 13%; walk-in boxes and refrigerated meat display cases, each 12%; open meat cases, 11%; vegetable coolers, 8%; beverage refrigerators, 7%; fish chests and general purpose coolers, 5%. Also listed for purchase are refrigerated salad display counters and deep freeze equipment.

With more and more emphasis on self-service in all departments of a complete food store, plus the surprising growth of frozen foods, refrigeration and its proper installation and maintenance is imperative. More self-service may be expected in the retail food field, too—not only because of the present desire of customers to select their own food items, including perishables, but because manpower and womanpower shortages soon will face all retailers.

During a national emergency, it is important that food distribution be kept to a high standard of competence, and this cannot be done without adequate refrigeration. Food is important in deciding the outcome of any conflict. It is vital to the health, morale and efficiency of the armed forces and of the civilian population.

Refrigeration plays a most important role in food distribution in both peace and war.



5 Century type SCH motors driving compressors in a frozen food plant.

Century 75 horsepower Type SCH motor driving a compressor in a skating rink.

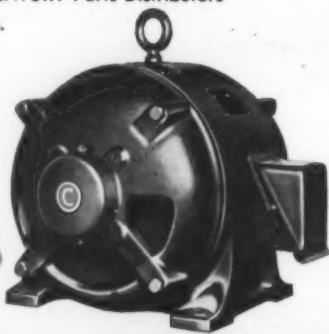
**Unusually Quiet
Starting and Running
Characteristics**

**For
REFRIGERATION COMPRESSORS**
You Need the High Starting Torque of

Century

Century Service Is Near Any Century Motor Driven Equipment. Satisfactory performance of CENTURY products is assured by more than 200 CENTURY Authorized Service Stations supervised by 28 CENTURY Sales offices.

- 1 Facilities for immediate exchange of most CENTURY standard ratings of standard construction are available at CENTURY Authorized Service Stations.
- 2 CENTURY Authorized Service Stations are qualified and equipped to service and repair any piece of CENTURY apparatus.
- 3 Genuine CENTURY renewal parts are available at CENTURY Service Stations, CENTURY Parts Distributors and at the factory in St. Louis.



Type SCH Motors

Century Type SCH, Squirrel Cage polyphase alternating current High Torque motors are ideal for refrigeration compressor applications. They bring compressors up to speed smoothly and easily under full load.

Century Type SCH motors have the high starting torque characteristics required for Refrigeration Compressors. The low starting current is desirable for automatic across the line starting.

In addition, Century builds a complete line of electric motors in a wide range of types, in sizes from 1/6 to 400 horsepower. Specify Century motors for all your electric power requirements.



CENTURY ELECTRIC COMPANY • 1806 Pine Street, St. Louis 3, Missouri
Offices and Stock Points in Principal Cities

Circle No. 30 on Reader Service Card for more information

APRIL, 1951 • COMMERCIAL REFRIGERATION

702R

Refrigeration—Vital to America

OF ALL the contributors to the progress of America, few play as vital a part as the Commercial and Industrial Refrigeration and Air Conditioning Industry, both in time of peace and in time of war. This vast industry—a bulwark of our national economy—serves in countless essential ways to protect foods, health and materials.

In the field of food distribution, for example, refrigeration is needed, at every step in the journey from producer to consumer, to protect the bulk of the nation's food supply from spoilage.

America's farms and fisheries annually produce approximately 180 million tons of food to feed the country's more than 150 million inhabitants and its military forces at home and overseas. The food industry is by far our largest industry.

To produce food is important—but production alone is not enough. The food must be processed, stored, and transported. What is produced must be conserved efficiently and distributed evenly.

We Americans are the best-fed people in the world. And we owe our good food as much to modern, scientific methods of food processing, storage and distribution as to our vast agricultural wealth.

The eating habits and health of the nation are dependent on a long chain leading from farms and fisheries to refrigerated and air conditioned food-processing plants, refrigerated railroad cars and trucks, refrigerated terminals and markets, the millions of refrigerated units in retail food stores—and finally to the refrigerator in the home itself.

The use of refrigeration has altered not only the kind of food we eat, but the food crops we raise. Today the production and distribution of food are geared to refrigeration and air conditioning, which serve the vital eco-

nomic role of saving surplus production, evening up distribution of seasonal products, and leveling off prices.

Refrigeration or air conditioning, or both, are required for processing or preserving about 77%, by weight, of the annual diet of the average American.

Refrigeration or air conditioning, or both, are required for processing or preserving 11 of the 13 items making up today's typical army ration.

In the food industries, refrigeration and air conditioning are used:

To pre-cool products before processing or transportation.

To freeze products during processing.

To maintain proper conditions for preservation before, during and after processing, during transportation, and during distribution—including storage warehouses, wholesale and retail stores, and locker storage plants.

At the wholesale level, there are more than 1800 refrigerated warehouses in the United States, with over 700 million cubic feet of storage space. More than 250 different kinds of food are stored and preserved in these warehouses. There are over 11,000 locker storage plants in operation today, with an additional 80 million cubic feet of storage space.

At the retail level, consumers annually spend over \$31 billion for food in the almost one million groceries, meat markets, bakeries, drug stores, restaurants, cafeterias, hotels, factories, institutions, hospitals, etc. At one stage or another in its processing and preparation, virtually all of this food requires refrigeration.

The data given here is based on the copyrighted booklet, "Refrigeration and Air Conditioning—Vital to America", published by Air Conditioning and Refrigerating Machinery Association, Inc., with the cooperation of Commercial Refrigerator Manufacturers Association and Refrigeration Equipment Manufacturers Association. The 46-page booklet is priced at \$1.

"...As Vital as the Food It Protects"

"REFRIGERATION—As Vital to America as the Food It Protects."

Using this theme, which might well become an industry slogan, Detroit Lubricator Co. has undertaken an ambitious advertising program aimed at impressing the consuming public with the vital importance of refrigeration and its maintenance under present economic conditions.

"Our thought is that in these times when every manufacturer can sell everything he can produce, we are going to spend our advertising dollar primarily in publicizing our industry, knowing that as the in-

dustry benefits, so will we," says F. G. Coggin, manager of Detroit Lubricator Co.'s refrigeration division.

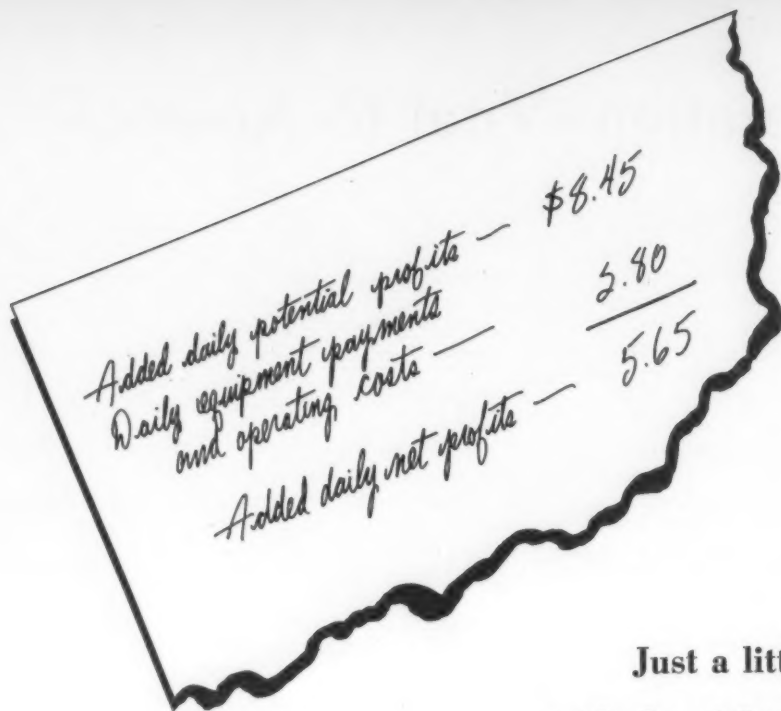
Detroit Lubricator's program, beamed at the consumer to increase the refrigeration man's business, has three phases:

1. Insertions in magazines covering the following fields: restaurant, dairy, meat market, grocery, drug store, and chain store or institutions. Advertisements to these fields will stress the "Refrigeration—As Vital to America as the Food It Protects" theme, and urge the maintenance of

existing refrigeration equipment in top-notch shape.

2. A wide program of advertising in refrigeration trade publications, to acquaint the industry at large with the company's efforts.

3. Direct mailings, four of them, to refrigeration contractors, dealers and service men, the first outlining the company's general program in behalf of the industry, and the next three carrying on this general theme but tied-in with "Detroit" products. These mailings will go directly to some 40,000 contractors, dealers and service men in the industry.



Just a little scrap of paper
—with the right figures on it—can

Help Your Customer Sell Himself

A PIECE of wrapping paper can be a mighty important sales tool. Not by any mystic alchemy, but simply by jotting down a few appropriate figures, you can convert many such scraps of paper into profitable sales of commercial refrigeration equipment.

Witness the example set by Carl Dieter, owner of Dieter Refrigeration Co., a Youngstown, Ohio, contractor. When Dieter sets out to make a sale to a food market operator, for instance, he follows the tested formula of talking profits—not equipment—to that market owner. But he does it in a very dramatic and effective way.

Let's tag along with Dieter while he makes a typical call on a small town merchant who has been carrying only about half a dozen items of perishable produce.

When Dieter first approaches this merchant on buying some new refrigerated produce equipment, the store owner is ready with a pat an-

swer: he doesn't need a produce case; he doesn't sell enough produce to warrant the expenditure of \$1500.

Dieter immediately realizes that here is a merchant who has just been coasting along. He doesn't know what his real sales potential is and he has never bothered to find out. He has come to accept the fact that his customers go to a better equipped store for their avocados and artichokes. He just doesn't recognize the fact that with the proper refrigeration equipment he could be deriving profits from 50 to 60 perishable items instead of six or eight. Nor does he realize the fact that he could be selling far more of even the few staple perishables he carries if he had adequate refrigeration equipment.

This man, Dieter knows, is wide open for a real sales pitch, even though he has given a flat "no" to the original proposal. So Dieter, who has heard this same argument many times before, steps back of the merchant's

counter, tears a piece of wrapping paper off the roll, and takes out his pencil. "Let's just see what the real facts are," he suggests.

Then the contractor starts naming produce items one by one. First he lists the few types that the merchant presently carries, and contrasts his present volume with what his potential could logically be expected to be if he had facilities for properly preserving and attractively displaying these items.

Yes, the merchant freely admits, he no doubt could sell so many more pounds of this or bunches of that if he had the necessary equipment to do a real merchandising job.

Dieter starts writing these items down on the sheet of wrapping paper and noting after each the additional amount which the merchant himself agrees could be sold. When he starts writing after each item the extra profit which these added sales would bring, the merchant really begins to

pay attention. By the time Dieter starts itemizing the long list of items which the store does not presently carry but which could be added if the new equipment were installed, the owner's interest really is aroused.

Dieter never adds an item to his list without the merchant's complete agreement, both as to the fact that he could advantageously handle the item and the amount of profit he could expect to derive from it. The contractor does not quibble with the prospect about a single item. If the merchant pooh-poohs its possibilities as a profit item in his store it is simply omitted from the list.

Just Add Up the Profits

Dieter knows that his final sales argument will be made that much stronger by the fact that his prospect has agreed to every point in advance. But Dieter's unusual procedure whets the merchant's interest so keenly that before the list is completed the merchant himself is suggesting items which the contractor has overlooked.

The computation of the additional potential profits is arrived at quickly and simply. Dieter writes down the cost of each item to the merchant and then subtracts this figure from the selling price. The merchant opens his eyes wide at the difference—the extra profits which he could ring up each day simply by installing a refrigerated case so that he could carry a larger variety of fresh produce.

The actual figures in this particular instance tally up as follows:

Added daily potential produce profits	\$8.45
Daily payments on proposed new equipment (computed on 2-year basis)	2.50
Estimated daily operating costs of equipment30
Total daily costs of equipment deductible from added profits	2.80
Net daily profit resulting from new equipment	\$5.65

When Dieter has finished these quick calculations right before the merchant's eyes he looks up at the prospect. But the prospect doesn't even notice him—he's too busy reaching for his fountain pen to sign a contract calling for delivery of the new equipment.

This may sound like the end of the

Continued on page 93



The special plenum discharge grille (see arrow) on this 5-ton cooling unit solves an air distribution problem in the P.I.G. super market in New Orleans. This unit cools the rear of the store while the busier front areas are served by two 10-ton air conditioners. Owners report considerable increase in trade since installing air conditioning.

Super Markets—Super Prospects

ONE of today's best markets for packaged air conditioners is the food market field, believes Alvin J. Roussell, owner of the Roussell Equipment Co., Gretna, La. Now that their price advantage is stabilized, super markets face competition among themselves and need to do everything possible to make shopping more pleasant for the customer.

As typical of the advantages air conditioning brings the super market operator, Roussell cites the experience of Fred Wilkes and Wallace Boudet, whose P.I.G. Super Market in New Orleans recently installed two 10-ton and one 5-ton Typhoon packaged units. Both partners assert that in their nine years' experience they have never found any single improvement to show such results in stimulating sales.

Besides an increase in store traffic, they have found that customers like the air conditioning so well that they stay longer and shop around, buying more of the luxury items that bring higher profits.

From the cost-saving aspect, air conditioning solved the store's open-type display case hot-weather problems.

"We had been having trouble with our open display cases," the partners reported; "when hot weather came, we could not keep them up to capacity, and they were apt to steam up, and accumulate frost. With these air conditioners on the floor, the cases are not so strained, and we have had no trouble with them at all. We can also count on weekly savings on cleaning, since the air is now filtered. General store cleanliness has improved about 75%, and stock cleaning has been virtually eliminated.

"And on top of that, employee efficiency and morale have gone up. We hope to be able to cut down our employee turnover by at least 50%, and a good deal of our optimism is based on the benefits which we anticipate as a result of the air conditioning alone."



Market owner Ben Lazar is no prouder of his gleaming white display cases (left) than he is of his efficient walk-in cooler (below), for he knows that the latter protects the profits which the former makes possible.



Backing up the display cases you sell with adequate "behind the scenes" storage facilities can mean . . .

MORE PROFIT FOR YOU

COMMERCIAL refrigeration dealers who concentrate their sales efforts on brightening up the front of a food store with shiny new display cases should not let their enthusiasm for "customer appeal" blind them to the fact much of the profit a store owner may make through the use of these modern new merchandising tools may be dissipated through the operation of inefficient bulk cooling facilities in the rear of the store which the customer never sees.

It is the duty of the refrigeration dealer to point out to his food market customers that there's no point in making money in the front of the store and throwing it away in the back. Chances are that the dealer who approaches the problem from this angle will win not only the good will of the market owner but also the extra refrigeration business involved in installing adequate walk-in coolers.

Here's an example of how such a situation was handled by Elmer Anderson, owner of Anderson & Morrel

Commercial Refrigeration Sales & Service, Youngstown, Ohio.

Ben Lazar, owner of Youngstown's Lazar Market No. 1, had been contending with a two-fold problem. In the first place his walk-in cooler wasn't nearly large enough to handle the large volume of meat sold by this modern market. And in the second place, he was having considerable trouble with meat shrinkage and discoloration, which caused too many outside cuts to be relegated to the scrap cans.

Lazar's inefficient walk-in cooler actually was costing him a goodly share of those extra profit dollars being brought into his store through the modern display cases in the market's sales area.

While he was struggling with this problem, Lazar learned of a walk-in cooler of ample size which was being offered for sale by a refrigerated warehouse. It measured 21 feet long, 11 feet wide, and 9 feet high. Years ago it had been an ice bunker type of cooler which later was converted to mechanical operation by use of a

5-hp ammonia water cooled refrigeration system.

The question was, could contractor Anderson dismantle this cooler, reassemble it at the Lazar market, and provide it with refrigeration equipment that would hold meat shrinkage to a minimum?

The answer was, in a word, yes. And here's how he went about it.

Several possibilities were considered in arriving at the best method for refrigerating the cooler.

The possibility of a water cooling system was eliminated first because of the cost element. Running at full capacity, the cooler would have required about 35 gallons of water per hour. This would have resulted in an operating cost as high as \$15 per month, not figuring the expense for electricity.

Should gravity coils be used? Such coils suspended from the ceiling would have been an obstacle to men carrying carcasses of beef on their shoulders, and this possibility also was discarded.

Next, blower type coils were con-

sidered. But which would be best, a single large blower or two smaller ones? The idea of the single large blower was given up because it would have extended far enough down into the room to cut off an important part of the working area along one wall.

Here is the solution finally adopted by contractor Anderson. He decided on using two compressors of 1/2-hp capacity each, with two blowers, one connected to each compressor. These were hooked up on one thermostatic control, with magnetic contactors in the line of each compressor.

Proper Balance Prevents Ice

This single control cuts the two compressors in and out at the same time, maintaining the proper temperature from both blowers. Thus the load in the two coils was balanced. Would the in-and-out traffic cause the blower near the door to ice up? Because the refrigeration load was properly balanced, this has not happened.

The compact blowers are installed in opposite corners of the room. The air is thus circulated at the proper velocity, giving uniform refrigeration throughout the cooler. And because the coils are relatively small in size they do not interfere with the loading and unloading of the cooler.

Shrinkage Losses Shrink

Both blowers have sufficient coil capacity to maintain high humidity in the cooler, which is usually operated at 36 to 38 F. Shrinkage in the new cooler is practically nil, whereas it formerly ran as high as 10 or 12%.

The 4-foot-wide space behind the cooler was ample to accommodate the two 1/2-hp compressors.

"My shrinkage problem has shrunk to nothing," says store owner Ben Lazar. "Before, I had a small cooler and actually paid for a big one—without having the benefits of a big one. I figure that the savings from this new cooler will pay for the equipment in less than five years. And this figure is definitely a conservative one."

The problem of inefficient coolers is a wide-spread one. Chances are that a fair share of such business is awaiting development in your trading area—and that it will pay you to check your customer and prospect list with the sales possibility in mind.

A "Gem" of an Installation

EVERY item of food so exquisitely arranged in its own particular setting that the entire establishment creates more the impression of a swank jewelry store than a deluxe food shop.

That's the display effect that Remus Catering Co., exclusive Milwaukee food service organization, wanted to achieve in its new retail food shop. How well it has succeeded—through the help of Federal Store Equipment Co., local commercial refrigerator distributor which handled this installation—is indicated in the photograph below.

For 25 years the Remus organization has been catering for exclusive parties and social events in the Milwaukee area. In so doing it has built up a splendid reputation for fine prepared foods. Until recently, however, this food was obtainable only through the catering service.

Then Remus moved to larger quarters where there was plenty of room not only for the catering kitchen must also for a sizeable store for the display and sale of their infinite variety of prepared foods. That's where Federal came into the picture.

The actual selling area is 26 feet wide by 42 feet deep. Because of the nature of the merchandise offered it was impossible to set up the store on a self-service basis. It was, however, necessary to provide a tempting display for such epicurean delicacies as champagne ham, roast pheasant, and hearts of palm, to say nothing of all manner of appetizers, desserts and baked goods.

To provide maximum display and wrapping space, three 8-foot double-duty Federal cases were installed with two intervening 6-foot wrapping counters built to match. Cold meats and dairy products are displayed in the first counter, all salads are in the second unit, and prepared meats and fish in the third.

A closed frozen food case, less superstructure, is located next to the rear case to display and sell frozen foods.

Along the other side of the store a 6-foot Federal refrigerated bakery case is aligned with three 6-foot non-refrigerated bakery cases. The center one of these is counter-high to allow for wrapping space and check-out.

Kitchen of this deluxe food establishment, which also is open for customer inspection, is equipped with the most modern facilities obtainable, including a 9 x 7-foot walk-in cooler and two reach-in boxes.



Jewel-like settings for epicurean delights are provided by the refrigerated cases in this Milwaukee catering shop, where choice food items are displayed like precious gems.



**TO MAKE THE MOST OUT OF
EVERY LOCATION—
Install Equipment by**

JORDON

*—top sales
makers for
FROZEN FOODS
and
PACKAGED ICE CREAM*

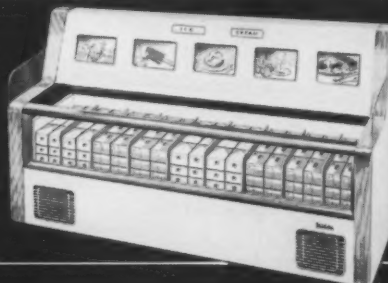
Because JORDON has built into this fine equipment the features that merchants seek and appreciate, JORDON dealers from coast to coast are getting the cream of this profitable equipment business. The JORDON '51 line of frozen food and packaged ice cream merchandisers gives the dealer top dollar volume, fast turnover, and the satisfaction of knowing that he is installing equipment with an outstanding record of success in thousands of the leading independent and chain organizations of America. Your inquiry is invited!

Exclusive!
**3-SHELF SUPERSTRUCTURE
FOR RELATED MERCHANDISE**
A practical "buy it now" reminder that stimulates extra purchases. Available on JORDON open top, low-temperature, merchandisers. OF9 Models illustrated with Standard and Shelf Type superstructures.



OPEN TOP — GLASS FRONT ★ SELF-MERCHANDISERS

OF-9, illustrated above. Capacity approx. 320 standard packages frozen foods. Model OF-17 (right), approx. 600 standard packages. Note extra wide top opening, bright illumination. Heavy duty, wrap-around rails and freezer divider plates. Hermetic condensing unit on pull-out tracks.



**SLIDING DOOR MODELS WITH OR WITHOUT
SUPER STRUCTURE**

9-12-17-26 Cu. Ft. Models

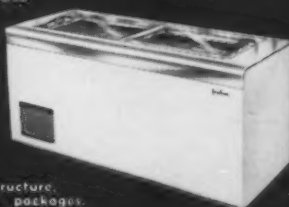
Features include: Stainless Steel top apron, door frames, door racks. Doors can be removed for peak hour rush. Ready for plug-in operation with fully warranted hermetic units. JORDON white auto-body exteriors. Superstructures (optional) have brilliant, full color subjects.

Model M-17 Without Superstructure. Capacity approx. 825 standard packages.

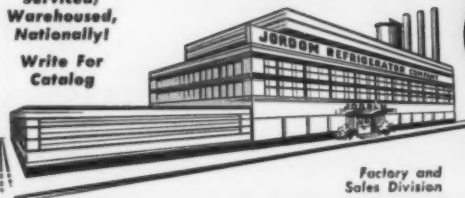


Model M-17 (left) capacity approx. 825 standard packages.

Model M-9-M-12 (right) 360-480 standard packages.



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APRIL, 1951 • COMMERCIAL REFRIGERATION

PLANNING THE "PROBLEM" STORE

COMPLETE store planning, more and more, is becoming the basis for a great proportion of refrigerated equipment sales, insofar as the food market field is concerned. Every store you are called upon to lay out or remodel poses some particular problem or set of problems. Many times, however, these problems represent certain basic conditions, and a solution arrived at for one store may readily be adapted to others having the same general characteristics.

With this thought in mind we asked several leading merchandisers of commercial refrigeration equipment to outline one particular "problem" store which they had encountered, pointing out the basic faults in the market's original layout and explaining how these were overcome in the new store plan. These specific store planning problems—and the answers to them—are presented on this and the following pages.

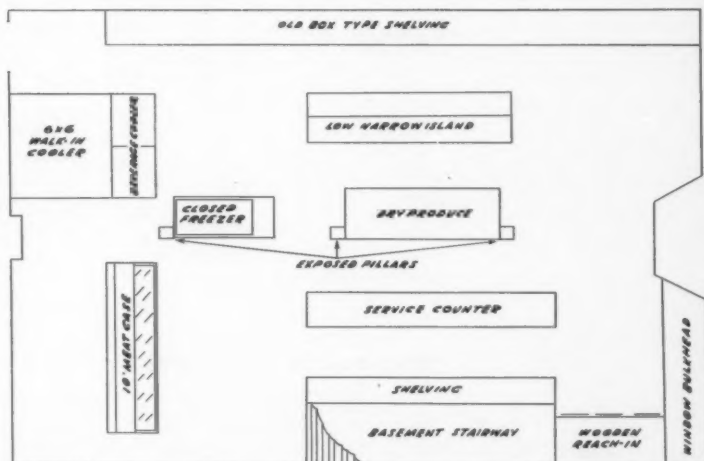
—The Editors

"Customers could not shop freely..."

Store plan by P. H. Broering Co., Cincinnati, Ohio

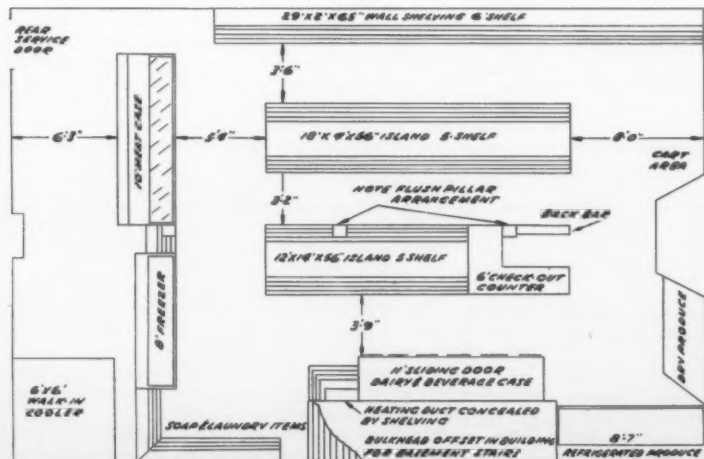
BEFORE

Store was set up in such a way that customers could not shop freely. Meat department was obstructed by three pillars, check-out counter was of the old service type, and customers would not shop the store themselves. Produce department was in the wrong place, and there was no provision for refrigerated produce. There was no room for shopping carts. Business dropped off to about \$400 per week and the owner sold out.

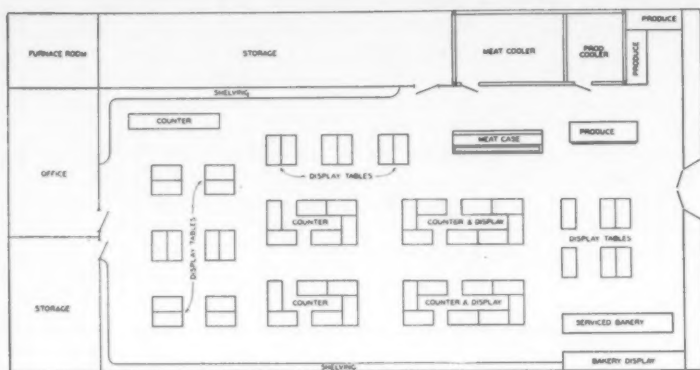


AFTER

New owner decided to remodel store following this plan. Note that on the new plan two of the exposed pillars were concealed by the island display, and the third sandwiched in between the meat case and the frozen food case. Meat department was relocated so that it could be seen from the main entrance. A sliding-door beverage cooler and a self-serve freezer were installed. Produce section was relocated so that it could easily be handled by operator at check-out counter. Business volume of remodeled store increased to six times that of the old store.

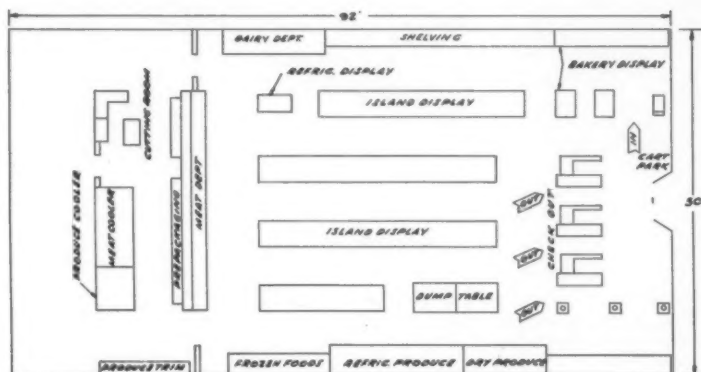


"Arrangement was inconvenient and costly..."



BEFORE

AFTER



Store plan by H. E. Humphreys Co., Concord, N. H.

FIVE basic problems existed in this store.

- (1) Store was "out of date" in appearance.
- (2) Arrangement was inconvenient and costly to clerk service.
- (3) Grocery volume per week had fallen exceptionally low because customers were inclined to leave store after purchasing meat and produce only.
- (4) Dairy products were merchandised from the bottom of a double-duty meat case.
- (5) Weekly meat volume was unsatisfactory.

Remodeled store plan corrected these five basic faults and also provided certain "extra" advantages. Solutions to the basic faults follow:

- (1) Super market styling with adequate lighting was provided.
- (2) Displays were arranged for convenience to customer and stimulation of impulse buying. Merchandise, not fixtures, was featured.
- (3) Modern steel shelving made possible arrangement of grocery items for maximum "eye" and "buy" appeal.
- (4) 16 linear feet of open self-service three-shelf dairy cases were added, making possible display of pre-packaged cheeses and other impulse items along with staple dairy

products such as milk, butter, and eggs.

- (5) Service meat case was replaced with 32 feet of open self-service meat cases having sliding mirrors at the back providing for restocking and rearranging and also for clerk service when required. Packaging room was located behind the cases with cutting area to the right of the walk-in cooler for labor-saving convenience.

The extra advantages resulting from the new arrangement were:

- (1) Addition of 16 feet of open self-service frozen food cases for improved merchandising of frozen foods, beverages, and ice cream.
- (2) Greater and more accessible bakery display was provided.
- (3) Super market check-out counters replaced island counters to speed up transactions and avoid congestion.
- (4) Movable refrigerated display table was added to feature spot specials of meat, produce, or dairy items.
- (5) Less storage room was required because more merchandise was carried in the sales area to stimulate mass buying through mass display.

Net result of the remodeling was a 340% increase in volume and a reduction in labor overhead.

“Double entrance caused traffic problem...”

THIS store was not remodeled but was laid out "from scratch" in an existing building, and incorporated ideas developed by the operators in their previous stores.

Three problems were created by the building structure itself: (1) Store depth of only 68 feet with shopping entrances and exits of equal value located almost directly opposite each other, thus complicating the flow of traffic through the various departments; comparatively small amount of wall space, hindering placement of major refrigerated fixtures; lack of back room area, causing difficulty with location of meat walk-in cooler and pre-pack room.

Two additional problems were raised by the owners. First, they wanted a meat department large enough to do a volume 25% greater than the previous "accepted norm." Second, they wanted a produce department that would exceed this "accepted norm" by 15% in volume.

To solve these problems, one major wall was used for the meat walk-in and pre-pack room, in effect creating a

"new wall" and resulting in a less elongated effect in the store interior. Store arrangement then was divided down the center, using the check-out areas as the focal center.

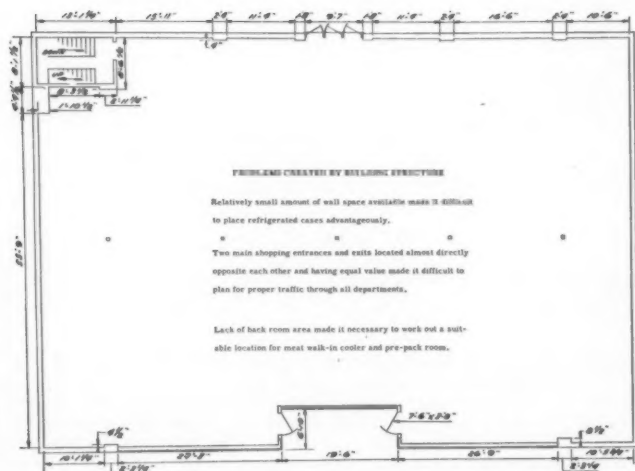
Meat department was coordinated with frozen food and produce departments, forming a complete shopping area of related merchandise, occupying approximately 50% of the total selling space. Placing refrigerated cases in center of floor permitted placing of major produce pieces on the floor without blocking view of any merchandise in the area.

Rear wall was utilized for dairy department, providing opportunity to use main wall area, opposite the meat department and equi-distant from both entrances, for departments capitalizing on impulse buying.

Wide aisles between center island fixtures, with aisles running in line with the two entrances, permitted symmetrical appearance without upsetting proper display balance of impulse and demand items.

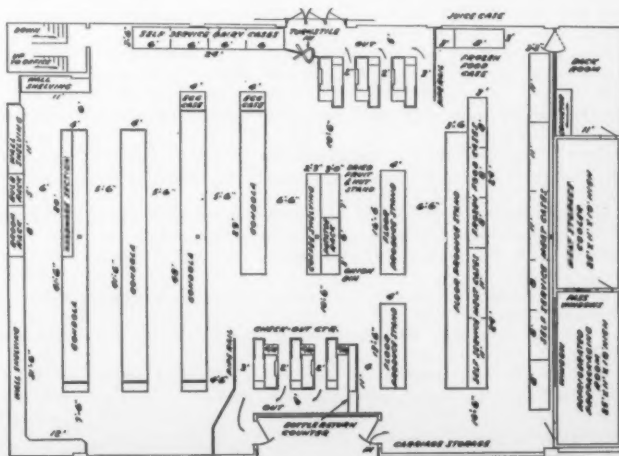
Walk-in coolers for produce, dairy, and frozen food storage were placed in basement.

Store plan by Schultz Co., Long Island City, N. Y.

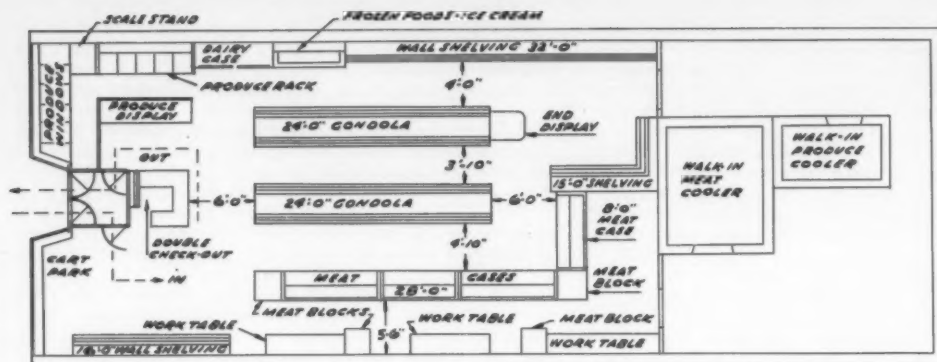


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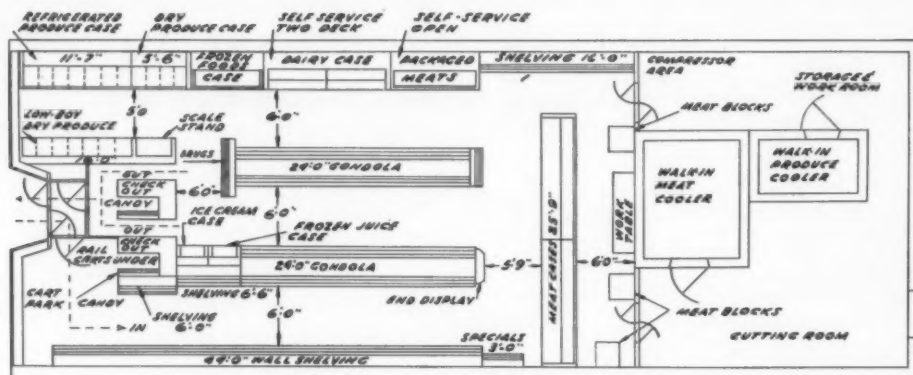


"Shoppers bought meat only..."



BEFORE

AFTER



Store plan by Lee Shell Co., Chicago, Ill.

PROBLEMS which existed in this store before remodeling are itemized below:

Customers entering the store stopped at the meat department and bought meat only, without being forced to shop the rest of the store.

Aisles were too narrow and crowded, and when the store was busy the traffic was jammed and disorganized.

Because of the poor location of the meat department and the narrow aisle in front of the meat cases, general appearance of this department was unattractive.

Butchers were forced to walk too far to walk-in cooler and cutting room. This so delayed the filling of orders, that by the time customers were through making their meat purchase they were tired of waiting and anxious to leave the store.

Produce department was too small, too crowded, and did not lend itself to attractive, sales stimulating vegetable displays.

Dairy case was too small and was located at front of store where customers were able to purchase demand items such as milk and butter without passing through the rest of the store.

Double check-out counter was unhandy for both operators and customers.

After the store had been remodeled, the following improvements were noted:

Grocery shelving located so that customers start shopping immediately upon entering the store.

Wide aisles, providing maximum visibility and comfort for shoppers and creating no bottlenecks or dead spots.

Customers must shop the store to reach the meat de-

partment, now located in the rear, and invariably pick up something else to add to the sale.

General appearance of the store has been greatly enhanced, and the visual display of meats increased meat volume 20% within six weeks after the remodeling. A self-service case for pre-packaged lunch meats has added materially to this increased volume.

More room for customers waiting to be served at meat counter and provision for a larger cutting room has increased the speed of handling customers.

The larger and more modern dairy department has shown a 30% increase.

The combination of refrigerated and dry produce displays, clearly visible from outside as well as inside the store, has increased traffic and volume tremendously in that department.

Increased capacity for mass display at end of gondolas.

Large capacity self-service frozen food case is located properly for final sales on way out of store. As a result, ice cream and frozen fruit juice sales have shown a 50% increase.

Bread, pastry, and cookies are located so as to route customers through other profit-producing sections of the store.

Spice shelf is located facing the meat department, where customers have time to select these high-profit items while waiting for meat.

No more waiting at the check-out counter during busy periods, as two checkers can work rapidly without either having to use the left-handed system which slows up operations. Candy and cigarette displays are located here where they are handy for last-minute purchases.

FOR INDUSTRIAL MOBILIZATION... Sell Westinghouse!

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NEW! COMPARTMENT-TYPE COOLERS 3-TEMP*..with Magi-Trol* *CONTROL



Model
WAC2

...of course, it's electric!

**YOU CAN BE SURE..IF IT'S
Westinghouse**

Mobilizing industrial capacity for the defense effort will mean expansion of present facilities plus building of new ones. In every plant, the First Aid Dispensary needs a Westinghouse Compartment-Type Water Cooler that STORES: pharmaceuticals at 35°-38°F. POURS: Drinking water at a refreshing 50°F. FREEZES: 3½ pounds of ice cubes and keeps them frozen. **AND DOES ALL THREE FUNCTIONS AT THE SAME TIME.**

So, it's sell Westinghouse! Sell the leader! Now is the time to sell architects and consulting engineers on specifying Westinghouse Water Coolers. Ten models available including heavy-duty, air-cooled, water-cooled and explosion-proof Coolers for defense plants, munitions plants, oil refineries, etc. Westinghouse has always been a leader in sales to industry. In the months ahead, sell the Cooler that already has high acceptance from Government and industry.

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Electric Appliance Division

Springfield 2, Mass.

For further information call your Westinghouse Distributor or mail the coupon below:

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Street _____
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4 CRAC



PEANUTS ARE GREAT FOR ELEPHANTS but Air Conditioning Dealers thrive on Profits

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says
TYPHOON

No wringing of hands or crying in their beer by Typhoon dealers. They make money on air conditioning — year in, year out. For Typhoon's policy is: "every dealer must prosper." And Typhoon makes good on this policy with a brass tacks program that brings in more dollars for dealers.

TYPHOON 5-Way PROFITS PLAN

- ① Typhoon, America's No. 1 specialist in packaged air conditioners, brings you the most complete line of units in the quick-profit range—1½-2-3-5-7½-8-10-15 and 20-tons. There's a size for every job!
- ② Typhoon units are engineered to deliver full rated capacity even after years of hard service. This means minimum servicing, maximum profits and good will.
- ③ Typhoon delivers air conditioning at the lowest dollar cost per ton capacity—value that means full markup for you.
- ④ Typhoon district managers give you 100% sales cooperation, with practical in-the-field training for your sales force.
- ⑤ Typhoon units are backed by 42 years of experience in the air cooling field...and by an advertising and promotion program that produces a steady flow of leads for you.



*Want to know about
the finest dealer setup
in the business?
Write us today.*



TYPHOON AIR CONDITIONING CO., INC.

794 UNION STREET, BROOKLYN 15, NEW YORK

Here's some information you may never have to use—
but if, as the defense program tightens, commercial
refrigeration equipment again becomes hard to get
here are some worthwhile tips on how you can . . .

Solve Your Own Shortage Problems

THERE is a lot of "scare" talk these days among commercial refrigeration dealers about what will happen when and if equipment becomes really tough to get under the pressure of defense or (God forbid!) wartime conditions.

But one dealer we know isn't the slightest bit concerned about such unpleasant possibilities. "We came through the last emergency period with flying colors, and we figure we can do the same again if we have to," explains Leo Bronstein, go-getting head of Capitol Refrigeration Co., Inc., in Albany, N. Y.

Bronstein has been in the commercial refrigeration game for more than 20 years, and he has operated his firm under a wide variety of conditions—good, bad, and indifferent. "I've never yet failed to make a decent living out of it somehow," he'll tell you confidently, "so I don't know why I should start worrying now."

Bronstein honestly feels that adapting himself to changing conditions is just a normal part of any business man's job. And he can't see that current conditions, or those during the last war, are any exception.

"All it takes is a little ingenuity and improvisation," he declares. And he points to his own experiences during World War II as a prime example.

Buying, Not Selling, Was the Problem

When the pinch on new equipment first began to be felt, Bronstein put a man out on the road at a salary of \$100 a week to do nothing but buy up used—but usable—equipment of all types. This equipment was brought back to the Bronstein shop where it was torn down, thoroughly reconditioned, and then rebuilt or reassembled into first class equipment to meet his customer's needs and demands.

It would take more space than we have available to catalog all of Bronstein's wartime improvisations, but here are a few classic examples:

"We bought up a lot of old brine type ice cream cabinets at \$15 to \$35 each. Then we pulled the brine tank out of each of these units, made up a new tank of galvanized steel, soldered tubing to the outside of this new tank, set it back in the cabinet, and sealed it up. Next we made sure that the pump was in good shape, slapped

on a new thermostatic expansion valve and temperature control, and presto—we had a freezing cabinet just as good as new! How well these units worked out in actual service is attested to by the fact that out of 400 of them that we made up 395 of them are still operating satisfactorily in the field.

"When we couldn't get condensing units, we'd make up our own. We'd pick up used pumps, motors, and receivers wherever we could, recondition them thoroughly to put them in tip-top condition, buy some stamped out bases or make up our own frames of angle iron, assemble these components into condensing units of varying sizes, and install them where they were most needed.

"Bronstein Gray" Became a "Buy-word"

"Blower coils, too, often became things of our own creation. We'd take old coils, cut them down to size, put return bends on them, install them in a housing of some sort, mount blowers in back of them—and there were our blower coils just as neat as you please!

"Old meat cases received a similar reconversion treatment. We'd tear them completely apart, reinsulate them if necessary, put in new bottoms, take out the old overhead coils, insert some of our home-made blower coils in the bottom, and there we'd have the nearest thing to a 'floating air' case you'd ever hope to see."

"We got hold of a good grade of gray paint," Bronstein smiles, and used it to refinish every piece of equipment that we fabricated or rebuilt. Before the end of the war our customers had seen so much of this improvised equipment that they jokingly began to refer to the color as 'Bronstein gray'."

That's the way the business of Capitol Refrigeration Co. went during the last war. It was a good business, Bronstein insists, and he's prepared to go back to it if need be. But frankly he doesn't expect that this will be necessary.

The refrigeration industry, he thinks, by its record during World War II and its achievements since then, will have established its essentiality sufficiently to assure production of enough new equipment to satisfy all reasonable requirements.

HERE'S WHAT YOUR CUSTOMERS ARE



DETROIT'S NEW

Selling the Vital Importance of YOUR



*Here's Where They're
Reading It!*



DETROIT, long a leader in the refrigeration industry, now moves further out front! Starting this month, in publications covering the drug, grocery, butcher, restaurant, dairy and ice cream fields, **DETROIT** launches a brand new campaign with two powerful purposes. Month after month **DETROIT** advertising will stress the vital importance of refrigeration to the American economy and American defense. Month after month this advertising will stress, to the largest mass users of commercial refrigeration equipment in the world, the vital need for periodic

Let's Get Action! See Your

DETROIT

LUBRICATOR COMPANY

5900 TRUMBULL AVE., DETROIT 8, MICHIGAN

Division of **AMERICAN RADIATOR & Standard Sanitary** CORPORATION

CANADIAN REPRESENTATIVE: Railway & Engineering Specialties, Ltd.,
Montreal, Toronto, Winnipeg • EXPORT DEPT., Box 218 Ridgely, N. J.

READING!



AS VITAL TO AMERICA
Refrigeration
AS THE FOOD IT PROTECTS!

Follow this Simple Plan
to Save Food and Profits.



- 1 GET EQUIPMENT CHECKED**
Regularly. The refrigeration
in these units is vital. When you
don't have it checked, you
run a few degrees higher in heat.
This means you waste your money and
America's food. Regular service check-
ups are the only sure protection against
these costly losses. Make sure a skilled
man with your service equipment will
save your money in the long run.
- 2 DEMAND DETROIT EXPAN-
SION VALVES & CONTROLS.** The
best service men use them. They are the
standard of the refrigeration industry.
DETROIT—most source of expansion
valves in the last emergency—valves
that do more or adequate repair
during this time. The Detroit DETROIT
—it's the only safe thing to do.

Has Your Refrigeration Equipment Been Checked Lately?
Call Your Refrigeration Service Engineer.

DETROIT
LUBRICATING COMPANY
Refrigeration Valves and Controls...
Complete Control Systems for gas and
oil, home heating and air conditioning.
DETROIT LUBRICATING COMPANY, 10000
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and TIMELY PROGRAM- SERVICE to Them and to America!

service check-ups. Never has there been a campaign like it and never has the need been so great. It's easy to tie in with this big new program. Government regulations recently announced provide a means of securing material for Maintenance, Repair and Operating supplies. See your **DETROIT** wholesaler for complete information and ask him for your supply of industry slogan stickers. Be sure you are adequately supplied with **DETROIT** expansion valves, solenoid valves and controls to meet all future service demands.

HERE'S A NEW SLOGAN
FOR THE INDUSTRY!

AS VITAL TO AMERICA
Refrigeration
AS THE FOOD IT PROTECTS!

Detroit Wholesaler and Tie In!



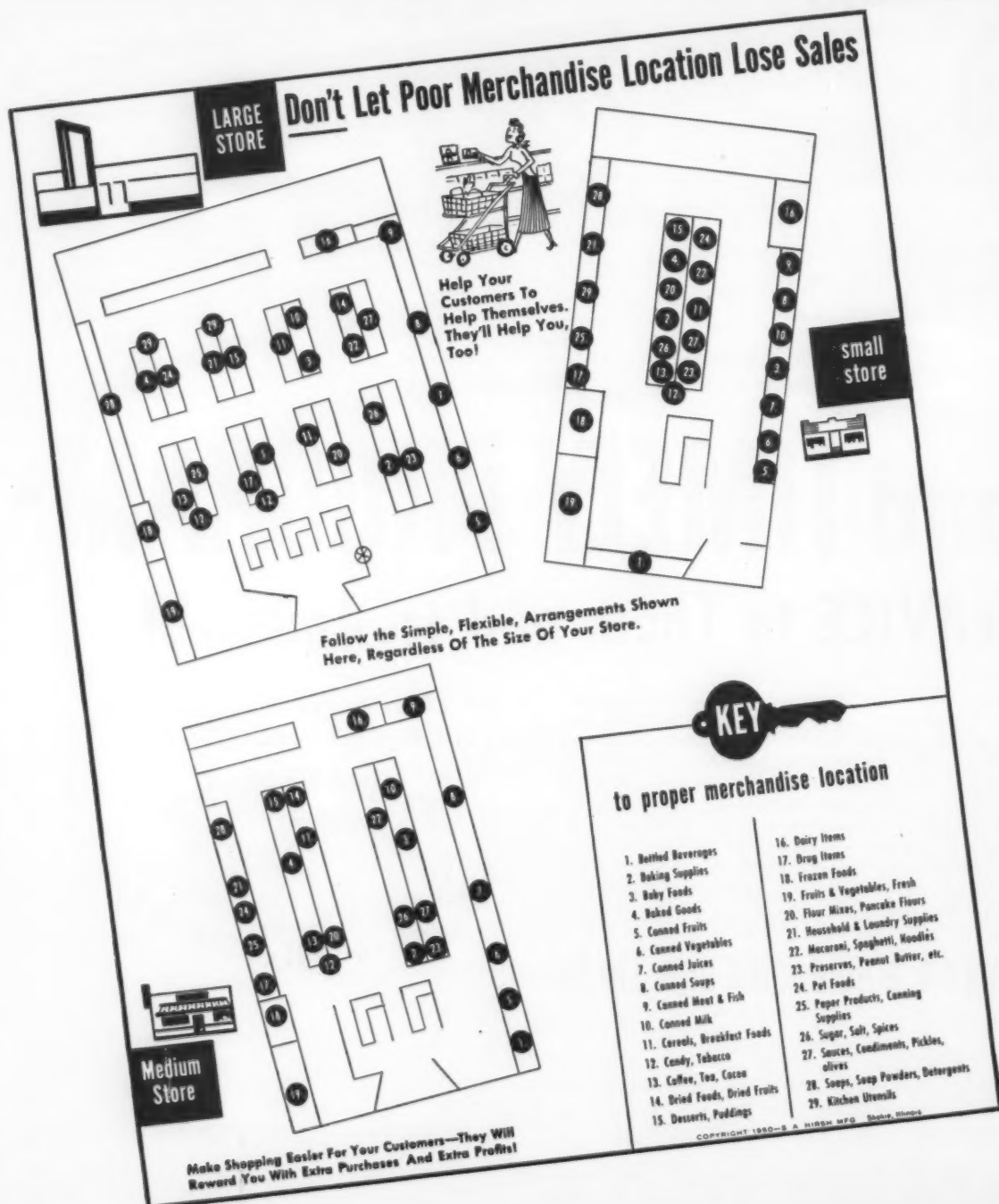
**DETROIT HEATING AND REFRIGERATION CONTROLS • ENGINE SAFETY CONTROLS
FLOAT VALVES AND OIL BURNER EQUIPMENT • DETROIT EXPANSION VALVES AND
REFRIGERATION ACCESSORIES • STATIONARY AND LOCOMOTIVE LUBRICATORS**

Serving home and industry. AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILER • ROSS HEATER • TOMAWANDA IRON

Circle No. 34 on Reader Service Card for more information
and AIR CONDITIONING • APRIL, 1951

The importance of complete store planning for food markets is stressed in the basic merchandise arrangements for small, medium, and large stores outlined on this page. These suggested layouts, reproduced through the courtesy of S. A. Hirsh Mfg. Co., are de-

signed to be of assistance to the refrigeration equipment dealer in helping his grocer customers organize their merchandise displays—both refrigerated and non-refrigerated—for most effective traffic flow and maximum impulse purchasing appeal.



Why Complete Store Planning?

OF ALL the changes experienced in the business world during recent years, none have been greater than those in the refrigeration industry. The basic thinking in selling methods has changed almost as much as the styles and uses of refrigerated equipment, especially in the food trade.

Years ago refrigeration dealers did not always think in terms of steady customers when a sale was made. Each transaction was handled as though it might be the last and the buyer's interests were more than often disregarded. Good will, as such, was not too important in the scheme of things. Today, commercial refrigeration sales are based on a long term plan and steady repeat customers are a "must" for any successful operation.

Service work, long avoided and frowned upon, has now become a means of building good will and customer confidence, with an eye to future sales when additional equipment may be needed.

The new importance of refrigeration in the food store has brought commercial refrigeration dealers many additional unit sales, as frozen foods, ice cream, and other perishables find their way in ever increasing volume into the nation's food markets. Even an isolated but new item like frozen coffee can force a food merchant to think in terms of lost sales or the need for additional refrigeration equipment. The millions of dollars spent in research and advertising by frozen food manufacturers alone, create more sales prospects for refrigeration dealers than an army of salesmen could dig up on their own.

Changes in refrigerated case styling, plus the increased number of units required per store, have brought about still another revolution in the

By Dave Shulman

Vice President, S. A. Hirsch Mfg. Co.

selling of refrigerated equipment. I refer, of course, to the complete store planning service.

While established stores are generally confined to the same space, the number of required refrigerated fixtures keeps growing and these must be fitted into place by rearranging those merchandise displays which now occupy the area in which the new cases will be located. This is a far cry from the early days of mechanical refrigeration when each unit sold merely replaced an older box or case which had been located in the same spot and which did not vary too much in size and appearance from the new fixture.

The advantage in selling a complete store modernization job, as against an individual fixture, is tre-

mendous. Such selling enables the refrigeration man to promote sound merchandising ideas and to stimulate the imagination of his prospect so that sales often are made on a service basis rather than being simply hard, competitive dollars-and-cents transactions. The old saying holds true—"To get a man's money for something, give him an idea for nothing."

Many complete market jobs are awarded on the basis of the character of the complete store plan rather than on the mechanical merits of a line of fixtures. Price, too, frequently becomes a relatively minor issue when intelligent store planning takes over.

A completely equipped modern super market may require not only meat and frozen food and dairy equipment, but water coolers and air conditioning units as well. Due to this diversity, it would make for difficult selling if each item had to

Continued on page 78



CLASSIC EXAMPLE of the type of clean, uncluttered, sales-producing layout which complete store planning makes possible is the modern food market illustrated in this photograph.



INVITATIONS like this draw carefully selected prospects to the "Grand Opening Parties" which Refrigeration Appliances, Inc., stages to promote the food markets which it equips. The mimeographed card taped to an actual photograph of the new store is a sure-fire way of arousing the interest of other food merchants. Then, when they appear at the new store, the dealer's salesmen escort these prospects on personally conducted tours of the market's refrigeration facilities. **RESULT**—More business for the dealer.

If you're looking for a new way to promote equipment sales, take a tip from this dealer and

INVITE YOUR PROSPECTS TO A PARTY

BUILDING customer goodwill is one of the surest ways of building business volume. Realizing this fact, Gordon L. McWilliams, head of Refrigeration Appliances, Inc., in Atlanta, Ga., uses all the usual tricks of the trade to cement friendly relations with the local food store merchants who comprise the bulk of his commercial refrigeration customers—and then he adds an extra special touch of his own.

What is this gimmick that McWilliams now counts as his No. 1 sales asset? Reduced to its simplest terms it consists of "throwing a party to celebrate the opening of every food store we equip."

Now averaging from 10 to 16 flamboyant opening celebrations per year, Refrigeration Appliances has developed a host of loyal friends among the Georgia capital's food retailers. Not only do the "Grand Opening Parties," as they are labeled,

draw thousands of local townspeople to each newly equipped store, but—even more important—they pull in dozens of other food store owners, all carefully invited by the commercial refrigeration dealership, who themselves are logically likely to become Refrigeration Appliances, Inc. customers.

"We've found that staging these stunts does three things for us," McWilliams says: "First, we help the grocer start off with a huge day's volume on his opening day—a boost which he always appreciates.

"Second, we make him into a valuable friend, who will enthusiastically recommend our equipment when we bring a dubious prospect around to see the original installation.

"Third, we attract a lot of additional grocers by dint of our own mail efforts, all of whom may be eventually sold on the same type of equipment."

McWilliams took his cue from "Stop the Music" and other national radio and TV giveaway shows in setting up his store opening party program, with each worked out to the "nth degree." As soon as the last piece of refrigerated display equipment is in, the company's party-planning service gets under way.

Acting as a "coordinator" McWilliams visits many food suppliers doing business with the market, such as meat packers, dairy producers, distributors, specialty food houses, etc., asking each to contribute some of their products for giveaways during the opening. Each likewise is invited to furnish a uniformed demonstrator, to dispense sample meats, baked goods, juices, coffee, specialties, etc., on the "big day." The Georgia dealer gets a lot of cooperation in each such approach, with the result that as many as 20 suppliers have cooperated for a typical party.

Next, McWilliams arranges for the printing of tickets, for door prizes, for house to house distribution of handbills advertising the opening, for the free food baskets, etc. A hillbilly band, broadcasting from a studio mounted on a flatbed truck, has been used for many of the events, to enliven the festivities. Finally, a colorful newspaper ad is arranged for, with Refrigeration Appliances splitting the cost, to call attention to the refrigerated cases used.

"In several cases, we have even had a half hour's free radio time, during which quiz shows, in-store interviews, etc., handled by a professional announcer, brought even more people to the store," McWilliams grins.

Invitation by Photo

For his own direct benefit, McWilliams coincidentally puts into action a highly unusual direct mail program which is aimed directly at grocers throughout Atlanta. To insure that many of them will attend the opening, the Atlanta dealer sends each one an 8x10-inch photo of the interior of the new foodstore concerned, with a card giving all the details taped to the lower right corner.

These cards, printed up on a penny postcard duplicating machine, shout some such headline as this: "We predicted the success of the Independent Grocers and we're doing something about it—see for yourself—visit Matthew's Supermarket, Thursday, September 15!" Below is a description of the equipment installed, and a repetition of the invitation.

Guided Tours Pay Off

The combination of photo and card gets incredibly good results, almost every grocer finding time to get out and look at his competitor's store, and to profit by what he learns. A sharp-eyed "spotter" for Refrigeration Appliances is on duty in the supermarket on opening day, and collars each visiting grocer for a tour of the store's refrigeration equipment. Many sales of \$5000 and more have been generated by just such a casual visit, McWilliams says.

Permanent signs, painted in black on white enameled steel backgrounds, are used by Refrigeration Appliances, to identify its own part in the

party and to call attention to its store planning service, its service department, and the lines of refrigerated equipment which it carries in stock.

Costs of the advertising, rented equipment, etc., are borne in all cases by the grocer who benefits from them, with few refusing to contribute, according to the Atlanta dealer.

For its part, Refrigeration Appliances contributes many hours of labor in helping to set up the store for the big event, in getting the donation prizes, in staffing the store for the opening day festivities, and in using

its extensive "know-how" in preparing every step of the promotion.

The result, invariably, is a sellout day for the market owner, and more goodwill for the refrigeration dealer than could possibly be generated by any other idea the firm ever has developed.

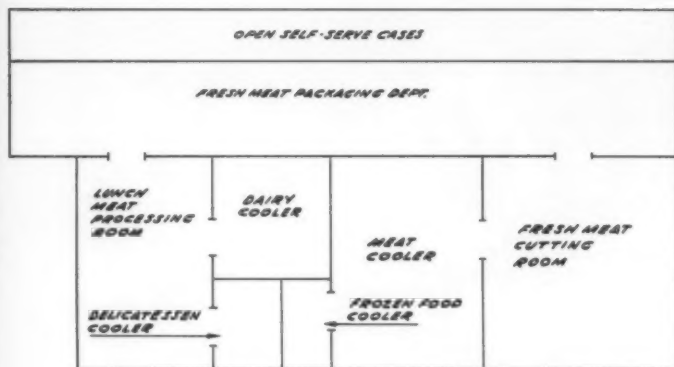
That's the story of a successful sales-building promotional idea, and the things which make it tick. With all of these factors skillfully blended together, store opening parties have become really "big business" for this Georgia refrigeration dealer.



CUSTOMER PARTICIPATION in quiz programs, shopper interviews, and similar events (above), with free baskets of food as the prizes, invariably draws a sell-out crowd (below) to the new store's opening. RESULT—More business for the market owner.



This installation shows how much more efficiently a modern food store can operate if the entire market, not just the equipment, is . . .



Meat moves smoothly from storage

DESIGNED FOR

IT HAS been convincingly established through actual experience that the installation of any self-service refrigeration equipment in a food store definitely will increase that store's volume of business.

But one thing that many refrigeration dealers don't realize—or that they forget—is that self-service equipment can yield its maximum profit return to the grocer only when it is intelligently integrated into an overall store plan designed expressly for self-service trade.

This fact gives commercial refrigeration dealers a powerful sales lever for selling a food market prospect or customer up from a single case deal to a complete store planning job.

There's another angle, too, which makes the merchandising of self-service equipment so attractive to the refrigeration dealer. Because of the potential profit story which can be so effectively demonstrated in support of self-service operations, this type of equipment often can be sold to replace orthodox service style cases which

still are fairly new and have left in them many years of useful life.

When you're selling self-service equipment you don't have to scout around for a merchant whose cases are ready for the junk heap. You can walk right into the store of any grocer who hasn't yet adapted himself to self-service operation and prove to him that he's losing money by not doing so.

Consider this account of one suburban Detroit super market which dramatically demonstrates those two important facts.

When the modern Albert's Super Market, Allen Park, Mich., opened its doors in the spring of 1948, its fresh meat, poultry and fish departments were located in closed cases. Less than 18 months later, however, owner Albert Perino, recognizing the merit of the self-service trend, had ordered them replaced with a 71-foot installation of self-serve, rear-loaded cases with mirrored sliding doors.

While this equipment in itself carries exceptional eye (and sales) ap-

peal, the real story lies in the excellent layout planning designed to give the best possible return from this substantial investment.

As can be seen from the accompanying layout of this up-to-the-minute market, the self-serve units (for fresh meat, poultry and fish) were installed to form a solid "wall" between the store and the extensive bulk cooler and meat processing departments. The space directly behind the line of cases is the fresh meat packaging and weighing department.

Total height of the display cases was raised to 84 inches by adding at the top a porcelain canopy. An insulation board partition was brought down from the ceiling to this canopy, or ledge, which effectively closed off the packaging room the full length of the 71-foot "wall".

This arrangement was necessary because it was planned to maintain in the packaging room, as well as in the adjoining work areas surrounding the coolers, a controlled temperature of 48-50 F. This was accomplished by



and processing...through the packaging department...and into the cases on the sales floor.

R SELF-SERVICE

use of a 5-hp condensing unit and several ceiling-mounted blowers which circulate the cooled air.

This layout uses refrigeration with maximum economy. It counteracts seepage from the compactly arranged coolers, and serves the needs of the self-serve meat department in a most important way. Sweating of the meats processed in the fresh meat and lunch meat rooms is prevented in the constant 48-50 F. temperature, and thus no condensation forms in the sealed packages after they have been put in the display cases.

The installation work was done by Contractor James Philp, of Allen Park Refrigeration Service, who obtained much of the equipment involved from J. M. Oberc, Inc., Detroit refrigeration jobber.

Special consideration was given to the layout of the bulk meat storage and handling facilities located immediately behind the "wall" of self-serve meat cases. Note the way these walk-in coolers are located to provide an uninterrupted flow of work

from the bulk storage facilities to the display cases.

Fresh meat, for instance, moves from the 14 x 16-foot walk-in cooler to the 14 x 20-foot cutting room and thence to the packaging department which runs full length behind the row of cases. Similarly, delicatessen items move from the 7 x 9½-foot dairy cooler and the 7 x 5-foot delicatessen cooler to their own processing room and then to the packaging area.

The 7 x 4½-foot cooler for bulk storage of frozen foods enters directly off the fresh meat cooler, so that the meat cooler actually serves as an anteroom. This is another measure designed to conserve as much as possible on refrigeration capacity. Common walls of the several coolers also make possible the economical use of insulating materials.

Contractor James Philp, owner of Allen Park Refrigeration Service, and the man responsible for the Albert's Super Market installation, examines one of the 12 condensing units which supply the refrigeration for this complete self-service job.

In the fresh meat packaging room, each girl is stationed at her individual table, equipped with weighing scale and electric sealing unit. The packaged cuts are transferred either directly to the display bins or to the storage cabinets at the bottom of the cases.

Suppose a customer wants a type or size of cut which she does not see in the display trays. She merely pushes a button on the front of the cases which rings a bell in the packaging room. A sliding panel rolls back and a white-uniformed operator takes the special order, which she produces promptly.

Refrigeration for the row of self-serve meat cases is maintained at 25-
Continued on page 101



"I just can't risk food spoilage!"

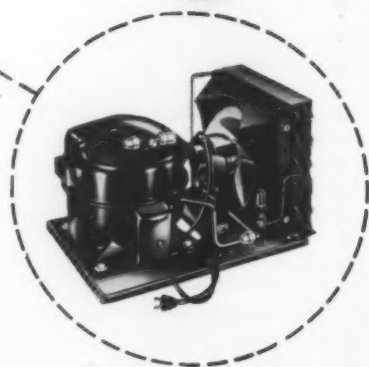


No merchant can risk food spoilage . . . and no manufacturer of frozen food display cabinets can risk using unreliable condensing units in the equipment he builds. That's why the name Tecumseh has become synonymous with dependability, and that is why more than 2/3 of all manufacturers of frozen food cabinets specify Tecumseh as standard equipment on all the models they make.

Of course there's a reason! Manufacturers know that Tecumseh's internal spring mounting and forced feed lubrication gives them a smooth, quiet and vibrationless unit that they can rely upon for low-cost, trouble-free operation. Yes, customer satisfaction can be assured when a Tecumseh Hermetic is specified as standard equipment in their frozen food cabinets.

No wonder Tecumseh's present production is over 200,000 units per month, and today there are more than 8,000,000 Tecumsehs in the hands of satisfied users.

Let us send you a catalog today describing these Tecumseh units.



TECUMSEH PRODUCTS COMPANY

TECUMSEH, MICHIGAN

UNIVERSAL COOLER DIVISION: MARION, OHIO

EXPORT DEPARTMENT: 2111 WOODWARD AVE., DETROIT 1, MICH.

★ The world's largest producer of condensing units for the refrigeration industry. ★

Circle No. 35 on Reader Service Card for more information

APRIL, 1951 • COMMERCIAL REFRIGERATION

NEWS OF THE INDUSTRY

EXPECT 25,000 AT RESTAURANT SHOW

Attendance of 25,000 restaurant owners and exhibits by more than 700 firms are expected to highlight the 32nd annual convention of the National Restaurant Association, May 7 to 11, at Navy Pier, Chicago.

The exposition will occupy the entire north wing of Navy Pier, and will feature most of the important manufacturers and suppliers in the field.

Convention program is being planned in anticipation of national economic events affecting the public feeding industry. Top-flight speakers from government agencies, public and business life and the restaurant industry will be featured.

May 7, first day of the convention, will be a special exposition day for dealers and wholesalers of the allied industries. For the restaurant industry, the convention and exposition officially opens on May 8 and runs through Friday, May 11.

Exhibitors from the refrigeration equipment field will include:

American Automatic Ice Machine Co., Bastian-Blessing Co., Frigidaire Div., Herrick Refrigerator Co., C. V. Hill & Co. Inc., Jordan Refrigerator Co., Stanley Knight Corp., Leitner Equipment Co., Liquid Carbonic Corp., Loudon Mfg. & Sales, National Store Fixture Co., Phoenix Soda Fountain Co., Puffer-Hubbard Mfg. Co., Refrigerated Equipment Sales Corp., Seco Co. Inc., Smith-Werner Co., Stainless Food Equipment Co., Star Metal Mfg. Co., Sweden Freezer Mfg. Co., Thermo Cuber Co., Emery Thompson Machine & Supply Co., Traulsen & Co., Tyler Fixture Corp., United Refrigerator Co., Victory Metal Mfg. Co., and York Corp.

MIDWEST REWA TO MEET IN DENVER

Spring meeting of the Midwest Refrigeration Equipment Wholesalers Association will be held at the Albany Hotel, Denver, June 22 and 23. Sessions will begin on June 22 at 10 a.m., it has been announced.

Fall meeting of the REWA group will be held at the Hotel Cornhusker, Lincoln, Neb., Oct. 12 and 13. Sessions will close in time for those present to attend the Penn State-Nebraska football game Oct. 13.

COPPER FINNS OK'D UNTIL APRIL 30

The National Production Authority has modified its basic copper conservation order to permit the use until April 30 of copper fins in heating and ventilating equipment used in home and other construction. Under the original order (M-12) use of copper fins in these items was not permitted after March 1.

NO ALUMINUM DUCTS AFTER JUNE 30

The use of aluminum in heating, ventilating and air conditioning ducts is prohibited after June 30 of this year. This ban in the use of aluminum in ductwork was covered in an amendment to M-7, the aluminum use limitation order, issued by the National Production Authority.

BOOKLET ANSWERS PRIORITY QUESTIONS

Answers to 85 questions relating particularly to the application of National Production Authority Regulations 1 and 2 to industry and business are contained in a pamphlet recently released by NPA under the title of "Inventory Control and Priorities."

The pamphlet also shows the names and titles of the heads of the principal NPA offices, bureaus and divisions, as well as the locations of the Department of Commerce field offices serving the National Production Authority.

REWA SECURES WASHINGTON AGENT

In a move to assure its members a timely source of information regarding the day-to-day developments in Washington, the Refrigeration Equipment Wholesalers Association has appointed Darby Associates as Washington correspondents for the group. They will prepare a weekly bulletin for REWA.

Announcement of the move was made by E. C. Marsden, REWA president and chairman of the association's Washington contact committee. Marsden said the action was designed to provide REWA members with a positive and authoritative source of information covering orders and regulations, and an interpretation of such orders in a manner which will be of help to refrigeration wholesalers.

Sterling F. Smith, chief of the refrigeration and air conditioning branch of WPB in World War II, has been retained as editorial consultant to Darby Associates.

ESSENTIALITY OF INDUSTRY STRESSED AT NPA MEETING

A request that special consideration be given by National Production Authority of the essentiality of equipment manufactured by the commercial and industrial refrigeration and air conditioning industry was made to NPA officials at a recent meeting with the Industry Advisory Committee, held to discuss measures aimed at conservation of scarce materials in industry products.

Such items as food storage equipment and refrigeration machinery are essential to the preservation of food, it was pointed out.

Committee members estimated that about 6% of the dollar volume of the industry's business has been

in maintenance and repair supplies, and requested information from NPA as to prospects for obtaining materials with which to assure customers of continued servicing. NPA advised them that measures are under consideration to provide certain amounts of materials for maintenance, repairs and operations.

The committee recommended that supply percentages, if applied to the industry under NPA orders, be based on periods longer than quarter-years, because of factors peculiar to the production and installation of industry equipment.

Committee member also said that the industry needs 90 days advance notice be-

fore any new NPA orders are issued governing the use of steel or other materials, so that manufacturers can schedule production. NPA officials said this fact would be given consideration in drafting any orders directly affecting the industry's products.

A task committee named at the first meeting of the group submitted a partial report on a proposed conservation order, but asked for more time to finish its survey. The task committee said it would recommend the minimum use of scarce materials needed to produce, for example, good water coolers, but that good water coolers cannot be made without copper.

WE TAKE CARE OF

Eastern

CONDENSATE

DISPOSAL UNIT



Designed for the air conditioning field, here is a completely automatic, foolproof unit that removes condensate fluids from the receiver tank and pumps them to an outside drain. Simple to install . . . Low operating cost . . . Totally enclosed motor . . . Compact, rugged, rustproof construction . . . Quiet and reliable in operation.

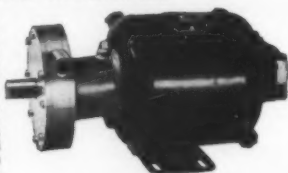
SPECIFICATIONS

Tank — Approximately 1½ gal. capacity with ¾" inlet, ½" outlet. Brass with black enamel outside.
Pump—Bronze centrifugal pump. Delivery app. 4½ GPM at 0 PSI and shut off of 12½ PSI.
Motor — 1/40 HP 3450 RPM, single phase, 60 cycles, 115 volt, totally enclosed, ball bearing, capacitor start motor.

Control — Controlled by a float operated switch, so set to pump out app. 0.8 gal. of condensate at each operation. Built-in check valve prevents the outlet line from draining back into the tank.
Overall Dimensions—5¼" wide; 9¾" long; 12 15/16" high. Weight 21 lbs.

Investigate Eastern's Proven Pumps for ICE CUBING MACHINES

Designed for continuous duty under severe operating conditions, the Eastern Model D-11 Pump is a heavy duty centrifugal pump. Size: 10" x 5½" x 3". Weight: 18 lbs. Power: ½ HP, heavy duty, split phase, fully enclosed, induction motor. Available in 110 or 230 volts A.C. Maximum output: 8 GPM at zero pressure. Maximum pressure: 14.5 PSI at shut off. Furnished in special alloys for hazardous service. Built for dependable service.



MODEL D-11

WRITE FOR COMPLETE CATALOG
Dept. A-11

Eastern INDUSTRIES

INCORPORATED
296 ELM STREET

NEW HAVEN, CONN.

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BUFFALO EXHIBIT IS APRIL 6 TO 8

The 1951 Eastern Refrigeration and Air Conditioning Educational Exhibit and Conference will be held at Buffalo, New York, on April 6, 7, and 8. It is the last in a series of such sectional conferences sponsored by the Refrigeration Equipment Manufacturers Association and the Refrigeration Service Engineers Society.

The entire 17th floor of the Hotel Statler will be used to house exhibits. Meetings will be held on the same floor. Hours during which the educational displays will be open are: Friday, April 6—1 to 5 and 7 to 10 p.m.; Saturday, April 7—10 a.m. to 5 p.m.; Sunday, April 8—12 noon to 4 p.m.

The conference will have an international flavor with the Canadian Refrigeration Equipment Manufacturers Association and the Interprovincial Association, both of Canada, joining with the Refrigeration Equipment Manufacturers Association and the Refrigeration Service Engineers Society in promoting the event. Also cooperating are the Refrigeration Equipment Wholesalers Association and the Refrigeration and Air Conditioning Contractors Association.

Committees in charge of the various phases of the conference are:

General chairman, Bert Miller, Medina, N. Y.; International RSES co-ordinator, John D. Mendell, Rochester, N. Y.; co-chairman, Chester Schintzius, Buffalo; Interprovincial Association chairman, Wm. J. A. Marshall, Toronto; Convention secretary, Ernest H. Wilson, Collins, N. Y.; publicity, Fred Asselmeyer, Buffalo; housing, Leon McCormick, Buffalo; registration, Jacob Van Derwalker, Cheektowaga, N. Y.; banquet and entertainment, James Hickok, Buffalo; reception, Koss O. Fogg, Schenectady; ladies entertainment, Mrs. Dorothy Pohl, Kenmore, N. Y.; chairman, ladies reception committee, Mrs. Margaret Bobzein, Newfane, N. Y.; transportation, Henry C. Pohl, Kenmore, N. Y.; program, Wm. L. Goeckel, Buffalo.

HAND TOOL MAKERS ASK STANDARDS

Members of the Hand Service Tools Industry Advisory Committee have recommended to the National Production Authority that an order be issued establishing standardized types and varieties of hand tools to conserve critical materials needed for the mobilization program. A similar order operated successfully during World War II.

NPA named a task group from the full advisory committee to submit specific recommendations on standardization of types and varieties of hand tools, and to suggest substitutions of less critical materials where possible. Representatives said the hand tool industry uses less than 1% of the nation's steel and has sales of \$100 million annually.

Production can reach \$115 million in 1951 without plant expansion if they can get materials, it was said. In World War II 25% of their production was set aside to maintain the civilian economy.

CEE-KLEER FACTORY, OFFICES MOVED

Cee-Kleer Products, Inc., manufacturers of sight indicators, driers and combination drier and indicator for commercial refrigeration use, announces the move of their executive offices and factory to 947 W. 6th St., Cincinnati 3, Ohio. This move is part of an expansion program to accommodate an increased volume of business, including contracts from Air Corps and Navy units.

"LEAK LOCK" IN USE IN AVIATION FIELD

Highside Chemicals Co. reports that its "Leak Lock" plastic sealing compound, originally developed for use in the refrigeration field, has been approved by both the Navy and Air Forces for other applications where joined surfaces must hold against leaks. The compound already is in use on two airlines, despite the fact that distribution for this field has not yet been established. More than 120 refrigeration wholesalers are currently handling the product.

PENN STARTS NEW SERIES OF "SHOWS"

A new series of educational shows designed as a service to heating and refrigeration engineers and servicemen will begin in Memphis on April 9 and travel throughout the southern and southeastern states, according to R. H. Luscombe, general sales manager of Penn Electric Switch Co.

This show was created to give a dramatic visual demonstration in the use, construction, installation and servicing of automatic controls. Included in the elaborate equipment are giant controls which actually operate, colored slides, and charts.

On similar tours of the eastern and midwestern states last year, attendance at the Penn meetings outstripped all estimates by 50 to 60 percent. The current show includes the latest current information and service helps.

Meetings are being arranged and sponsored in each city by local jobbers of Penn controls. According to Luscombe, each meeting will give the most thorough demonstration of controls possible in a single evening. After the regular session, individual installation problems will be discussed.

The "travelling" Refrigeration Control Show is scheduled to appear in the following cities: Memphis, April 10; Jackson, April 13; New Orleans, April 17; Mobile, April 20; Montgomery, April 24; Birmingham, April 27; Atlanta, May 1; Macon, May 4; Tampa, May 7; Miami, May 10; Jacksonville, May 15; Savannah, May 18; Charleston, May 22; Columbia, May 25; Raleigh, May 29; Greensboro, June 1; Charlotte, June 5; Asheville, June 8; Knoxville, June 12; Chattanooga, June 15; Nashville, June 19; Louisville, June 22.

NEW NOR-LAKE SITE WILL DOUBLE SPACE

A new plant at Hudson, Wis., that will double available floor-space for Nor-Lake, Inc., manufacturers of commercial refrigeration equipment, is now complete and ready

for occupancy, according to Don E. Stevens, sales manager for the firm.

The plant site is located three blocks north of the toll bridge on the bank of the St. Croix river. Floor plans for the two-level building measure 50 by 170 feet. Two loading docks and a large freight elevator are provided to facilitate material handling.

Of cement block and steel girder construction with a steel beam wood roof, the building houses office space, consultation rooms, a warehouse, engineering departments and machine shops. Two individual heating plants maintain a zone-controlled temperature in the building.

SOLDERS DEVELOPED THAT CONSERVE TIN

Development of a group of solders which permits savings of 50% or more in the tin normally used for solders has been announced by the newly formed Metals Conservation Committee of Federated Metals Div., American Smelting & Refining Co.

The new tin-conserving solders, known as ST (save tin) solders, are basically silver-tin-lead alloys as compared with the usual tin-lead variety. Addition of a small percentage of silver, it is said, permits a marked reduction in the tin content, as the same tin content, at the same time giving a joint at least as good as that given by the original alloy.

For such a typical application as the joining of sheet metal, in heating or air conditioning work for example, the new ST-30 (30% tin) solder would perform as well as the commonly used 50% tin-50% lead or 40% tin-60% lead solders, it is claimed.

THERMO-KING GETS CONTRACT FROM QMC

U. S. Thermo Control Co., Minneapolis manufacturer of refrigeration equipment for highway trailers and railway cars, has recently been awarded a \$1,067,638 contract covering construction of portable refrigerator units for the Army quartermaster corps.

JAMISON DOORS

Installed in Model Research and Development Laboratories

ONLY THE BEST
DOORS WERE
GOOD ENOUGH

for installation in Portland Cement Association's national research and development laboratories—moist curing rooms, fog rooms, controlled atmosphere rooms capable of duplicating conditions of arctic cold or tropic heat and humidity.



IN MOISTURE AND HUMIDITY TESTING ROOM

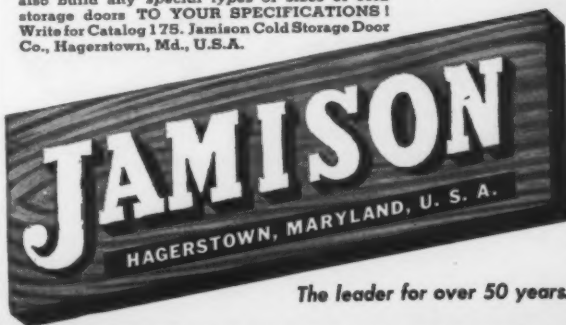
the Stainless Clad, Jamison LO-TEMP Door provides a moisture and vapor proof barrier and seal.

FOR TESTING TO 25° BELOW ZERO

the popular Jamison SUPER FREEZER Door is used in this Testing Room where effects of extremely low temperature are studied.



Standard models of superior Jamison-built doors are available in a wide range of sizes. We will also build any special types or sizes of cold storage doors TO YOUR SPECIFICATIONS! Write for Catalog 175. Jamison Cold Storage Door Co., Hagerstown, Md., U.S.A.

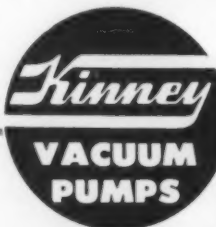




WITH THIS VACUUM PUMP

KINNEY CVM 3534 COMPOUND VACUUM PUMP has a free air displacement of 4.9 cu. ft. per min. plus the ability to pump down to extremely low absolute pressures (0.1 micron or better). Pumping speed and efficiency account for the immediate and widespread acceptance of Kinney CVM 3534. In less than a year, hundreds of these reliable units are already working in many different types of industrial, research, and processing operations. Put speed into your vacuum work with the vacuum pump that's built for speed.

Compactness is another important feature of the Kinney CVM 3534. The complete unit — including ½ HP motor, pump, oil reservoir, and oil separator—fits into a space only 19" x 13½" x 16" high. Fill in and mail the coupon for complete information on this new pump. Kinney Manufacturing Co., Boston 30, Mass. Representatives in New York, Chicago, Cleveland, Philadelphia, Los Angeles, Houston, New Orleans, San Francisco, Seattle, and foreign countries.



KINNEY MANUFACTURING CO.
3618 WASHINGTON ST.
BOSTON 30, MASS.

Gentlemen:
Please send me Bulletin V50-A describing the new Kinney CVM 3534 Compound Vacuum Pump.

Name.....
Company.....
Address.....
City..... State.....

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58

VALUE OF LOCKERS IN DEFENSE CITED

An estimated 80 million cubic feet of gross storage for perishable food at zero temperatures is dispersed at widely scattered points over the country through the 11,600 locker plants now in operation.

A survey recently completed by the Farm Credit Administration of the U. S. Department of Agriculture shows these plants have space equivalent to nearly half the commercial sharp-freeze storage space in the United States on Jan. 1, 1950, the date the space was reported. The study was made under the Research and Marketing Act.

"Since these plants processed over 1½ billion pounds of perishable food during 1949 and have this large amount of storage space at hand," says L. B. Mann of the Farm Credit Administration, "they can play an important part in conserving, storing, and distributing locally grown, high energy perishable foods. This means lessening the strain on overburdened transportation facilities; reducing distribution and handling costs; saving critical wrapping materials such as tin, aluminum, and steel; and making good use of labor in small towns.

"In addition, in case of a serious emergency these locker plants would be of inestimable value because of the food stored and their already available processing facilities at widely dispersed locations."

ARMY NEEDS TOP C.S. GROUP STUDIES

The development of additional frozen concentrated juices and dehydro-frozen foods that might prove useful to the military services was the top recommendation of the Cold Storage Advisory Committee which met in Washington, D. C., recently.

As emergency situations may at times prevent holding commodities under optimum storage conditions, high priority was given to studies of the effect of fluctuating temperatures upon frozen and refrigerated farm products.

Savings of transportation facilities and manpower might be made through

wider use of the 11,000 frozen food locker plants as sub-distribution centers for frozen foods. The committee recommended a survey to determine the feasibility of such use.

Because of its special significance as part of a national defense program, the committee commended work already done and urged continuation of work on frozen milk concentrate, frozen poultry, precooked frozen foods, and on a number of other commodities.

Other specific recommendations submitted by the committee were: (1) Establish a national low-temperature laboratory for doing research on the basic principles of thermodynamics and related fields such as heat transfer and the effects of ice formation on foods; (2) investigate the value of preserving viability of seed by storage at temperatures around and below 32°F.; (3) develop improved and substitute materials for packaging and coating of commodities to be held in cold storage; (4) develop improved methods for freezing, refrigeration, and storage of foods and for cooling and refrigeration of farm products on the farm; (5) cooperate with other agencies which are studying effects of low temperature environment upon man, particularly the role of nutrition in developing resistance to cold.

RUTHENBURG CITED BY FREEDOM GROUP

Louis Ruthenburg, chairman of the board of Servel, Inc., has been honored by Freedoms Foundation for his "significant work in building a better understanding of the American way of life."

In a special ceremony at Valley Forge, Pa., Freedoms Foundation officials announced the names of American individuals and organizations selected to receive awards for outstanding contributions to freedom during 1950.

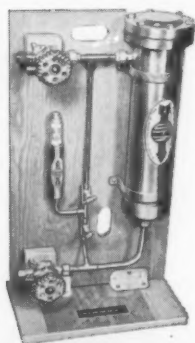
Ruthenburg's award in the public address division was for his talk "Birth-right of Freedom," delivered before the Indiana University Workshop on Economic Education last July.

FACTS ON THE DRIER SITUATION

from DFN "drying headquarters"



McIntire DC
Filter-Drier



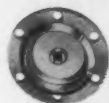
DFN Moisture
Control Unit

1. McIntire is manufacturing and delivering DFN Driers to the fullest capacity of its copper and brass allotment. Every pound of allocated metal goes into DFN Driers and drying accessories. We make nothing else. Therefore, you are likely to have more success obtaining driers, by asking for DFN.

2. McIntire DC Driers have double the capacity of the conventional drier, size for size. That means longer protection—twice the service life—less replacement needed. Your drier dollar goes farther—each pound of critical metal goes farther in McIntire DC Driers.

3. Further savings in time, money and metal are made by using DFN Cartridge Type Driers. Once installed, only an inexpensive, metal-saving cartridge is replaced occasionally to keep systems protected.

4. Wherever possible, obtain a DO number to cover your purchases from your wholesaler. This improves your chances of getting the drier you need—it enables your wholesaler to more readily replenish his stocks. Keeping refrigeration going is an essential job.



DFN Cartridge
Type Drier



DFN Progressive
Filter

We're all in this together — let's work it out together!

Our 26th Year

DFN

TRADEMARK

McINTIRE CONNECTOR COMPANY
257 Jefferson Street, Newark 5, New Jersey

DRIERS . . . all types and sizes, up to 100 tons
MOISTURE CONTROL UNIT MOISTURE INDICATOR
STRAINERS FILTERS

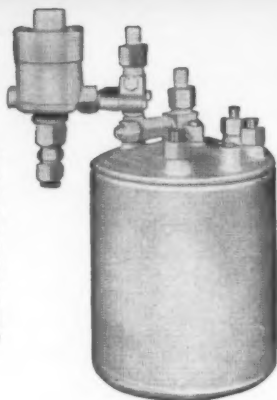
TEMPRITE

INSTANTANEOUS...

WATER COOLERS
BEVERAGE COOLERS
CARBONATORS
ACCESSORIES

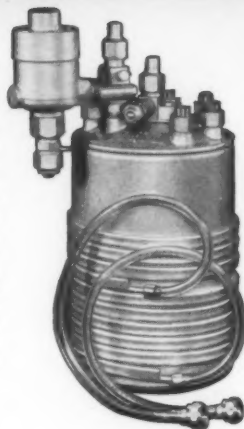
WATER & BEVERAGE COOLERS

Compact Temprite water coolers operate on patented *instantaneous cooling principle*. There's a Temprite model for the smallest to the largest commercial or industrial application. *Adaptable for use with carbonated beverages and many other special liquids*. Constructed entirely of non-corrosive materials.



BEER COOLERS

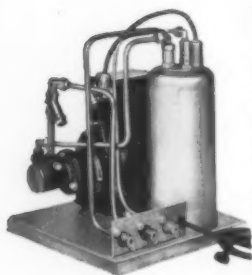
Actually cool up to 3 kinds of beer plus carbonated water and plain water in the same cooler at the same time. Patented control maintains perfect drinking temperature under heaviest loads and protects against needless draught beer waste. All stainless steel coils are easy to keep clean and high tensile strength offers safety and permanency. Beer coolers are obtainable with or without the outside water and soda water cooling coils if desired.



CARBONATORS

Temprite Automatic Carbonators will deliver as many as 6450 glasses of highly carbonated water from a single 20 lb. tank of CO₂ gas. No loss of CO₂ gas through purges or vents. Gives peak carbonation at lowest CO₂ gas pressure.

Shown is the completely self-contained packaged unit. Temprite Carbonators are also available for remote installation of the pump, motor and relay assembly; and a Cooler-Carbonator assembly is offered which will cool and carbonate water at the rate of 300 glasses per hour, at a constant 40 degree temperature.



EQUALIZER TANKS

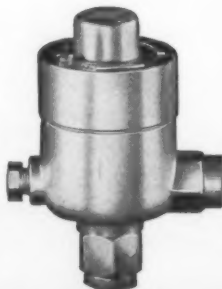
Prevents short cycling of condensing unit and permits temporary overloading of cooler without passing load directly on to compressor. Recommended in all Temprite installations except in large duplex systems. Made of cold rolled steel, electrically welded, pickled and neutralized; thoroughly cleaned and dehydrated. Aluminum finish. Approved by Underwriters.

TWO-TEMPERATURE VALVES

Provide a wide range of adjustments and close temperature control. Essential to the multiple type refrigeration system, the Temprite 2-Temperature valve is also used on single applications where closer and more constant regulation is required than can be furnished by the condensing unit control switch.

Of the throttling type, these valves begin to close as the cooling unit approaches its required low temperature. The amount of refrigeration is thereby reduced, and all cooling units in the system reach their cut-out point about the same time, thus maintaining a better balance in the system.

Five models are available for use with Freon, SO₂ or Methyl Chloride refrigerant in capacities up to 250,000 B.T.U. Rugged construction, accurate control, and low pressure drop across the valve insure long life, satisfactory operation.



OIL SEPARATORS

In capacities from 1/6 H.P. to 50 tons; removes over 98% of oil from the refrigerant gas along with dirt, scale, core sand, etc. Keeps oil in compressor, away from condenser, expansion valve, and evaporator coils. Permits the refrigerant to boil at its true boiling point. Heat transfer is increased up to 20%, thus evaporator temperatures from 4 to 7 degrees lower can be reached at no increase in operating time.

Adaptor blocks are available to facilitate installation into systems up to 5 tons. Installed between head of compressor and discharge shut-off valve. Studs, bolts and gaskets included as a complete assembly.



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TEMPRITE PRODUCTS CORP.

ORIGINATORS OF INSTANTANEOUS LIQUID COOLING DEVICES

P. O. BOX 72-G, EAST MAPLE RD.
BIRMINGHAM, MICHIGAN

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CONTRACTORS

NEWS • ACTIVITIES • PLANS

More Services to Members Is Aim of RACCA '51 Program

AN aggressive program for 1951 covering both increased service to present members and a vigorous campaign for new members designed to double the present number of firms in the association were mapped by directors of the Refrigeration and Air Conditioning Contractors Association at a meeting in Washington, D. C. recently.

President Theodore A. Reina, in outlining RACCA's 1951 program to the directors, said that it would include a plan for keeping members fully informed on defense regulations and orders affecting their operations. The program also will include the offer of a complete membership kit to all individual members.

Special "Kit" for Members

This kit would consist of such things as standard maintenance contracts, standard invoices, standard guarantee, decals and cuts of the RACCA emblem and the necessary legal forms for operating a refrigeration contracting business.

Reina predicted that RACCA would have double its present membership by the time of the annual meeting in Chicago next November.

National office of the association has been moved to New York City, and the firm of Schneider & Edelstein of New York City has been selected as executive vice president and general counsel. "Nate" Edelstein, one of the members of the firm, was for some years managing director of a refrigeration contracting concern and was a member of the National Emergency Refrigeration Service Council during World War II.

He was elected a member of the RACCA board of directors when the organization was formed, and served as recording secretary of the associa-

tion for three years. The firm of Schneider & Edelstein has for some years acted as business representative of the Refrigeration & Air Conditioning Guild of New York City.

Directors announced that they are considering adoption of a welfare plan for members, to be included as one of the benefits of membership, and to be written on a group basis.

George T. Howe and Al Weil, both of Chicago, were named by President

Reina as co-chairmen for RACCA's annual meeting in Chicago, to be held Nov. 3 and 4. George Schuld, of Cleveland, was appointed as RACCA representative at the April REMA-RSES educational exhibit in Buffalo.

Each RACCA director was appointed chairman in his own geographical area to handle all association activities that might arise. This move is designed to put local associations and individual members in closer touch with national RACCA activities.

Directors approved passage of the "fair competition" law now being considered by the Tennessee legislature. This law aims at limiting any company from using refrigeration as a "football" to sell its own particular merchandise—dairy and beverage firms, for instance.

Directors present at the meeting included Reina, Lee J. Quinn (Cincinnati), Ralph W. Lampie (Richmond), Art M. Palen (St. Paul), Warren W. Farr (Cleveland), George T. Howe (Chicago), and B. C. McCall (Chattanooga).

Some Guides to Follow on The New MRO Regulation

A blanket regulation providing a "DO" rating for maintenance, repair and operating supplies for all types of business establishments has been issued by the National Production Authority. The regulation, known officially as NPA Regulation 4, permits business places, both large and small, to use an extendible DO-97 rating to get needed maintenance, repair and operating supplies.

All that has to be done, to use the rating, is to write on the purchase order, or on a piece of paper attached to it, the words: "DO-97, Certified Under NPA Regulation 4," and sign it. The DO-97 rating carries the same priority value as other DOs, including those issued by the armed services.

As far as refrigeration contractors, dealers and service companies are concerned, here are some important things to keep in mind about the regulation:

1. The rating can be used only to get MRO materials for *your own* business. This means materials needed to keep *your own place of*

business in proper repair, and to obtain necessary operating supplies. Do not use your MRO quota to get repair materials to be used in doing work for your customers.

2. On service work that is done for your customers, the material should be charged against *his* MRO quota, not *yours*.

For instance, you are making repairs on refrigeration equipment in a food store. You can use the food market's DO-97 rating to the same extent that the food store owner could use it if he were doing the repair work himself. The cost of the materials is charged to the MRO quota of the person you're doing the work for.

You cannot use the DO-97 rating to get material to repair household refrigerators used in the home. Section 1 of the regulation specifically states that "the rating may not be used to secure materials for personal or household use".

3. The DO-97 rating is not to be used for obtaining installation ma-

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materials. It is for materials for maintenance and repair needs only.

4. You do not have to use the DO-97 rating to get maintenance and repair materials; the idea of the rating is to give you a priority to use in case you can't get needed supplies without it. But, if you *do* use the rating, then your total acquisition of MRO, *both rated and unrated*, becomes subject to the quarterly limitations of the regulation.

5. If you use more than \$1000 worth of MRO per quarter, you must record the expense as a charge against your MRO quota; but if you use less than \$1000 of MRO per quarter, all you need do is to keep a record of the transaction. You must preserve these records as long as the regulation is in effect, and for two years afterward. No special book-keeping system is needed, but this information should be kept so that it can be figured out without difficulty.

6. You can use your MRO rating

to get small items of shop or office machinery up to \$750 for any one such item. This is equipment you use in your business—not equipment that you sell. If you use the DO-97 rating to get items like this, you must charge it against your MRO dollar quota for that quarter. But if you get this equipment *without using the rating*, you do not have to charge it against your quota, even if you are using the DO-97 rating for your strictly MRO purchases.

Here Are Records To Keep on Prices

UNDER the terms of the General Price Ceiling Regulation issued by the Economic Stabilization Agency, all manufacturers, wholesalers and retailers are required to have the following records available for examination by representatives of the Office of Price Stabilization:

1. Records showing the prices charged by you for the commodities or services which you delivered or offered to deliver during the "base period", Dec. 19, 1950 to Jan. 25, 1951.

2. Sufficient records to establish the latest net cost incurred by you prior to Jan. 25 in purchasing the commodities, if you are a wholesaler or retailer.

3. A statement showing the categories of commodities and/or a list of services which you delivered or offered to deliver during the "base period".

4. A ceiling price list showing the commodities in each category by model, type, style and kind, or the services delivered or offered for delivery by you during the base period. This list should also include a description or identification of each such commodity or service, and a statement of the ceiling price. Your ceiling price list may refer to an attached price list or catalog.

Retailers may compile their ceiling price list by recording on their purchase invoices the price at which they sold or offered the commodity for delivery during the "base period".

5. A statement of your customary price differentials for terms and conditions of sale and classes of purchasers which you had in effect during the "base period".

6. Current records of the kind you

SELL and PROFIT

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Model OF8R

Frozen Food Case . . . one of the biggest selling refrigerators on the market today. Features controlled refrigeration and the Nofrost valve which automatically defrosts.

- 67 years of leadership in the commercial refrigeration field.
- Direct factory financing.
- Exclusive selling features: Floating Air, Coolite and the Nofrost valve.
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- A complete line of refrigerators, including: open cases, closed display cases, walk-in coolers, bakery, beer, florist and many others.

A few territories open for top-notch dealers.



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LOW COST
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for small
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and COMMERCIAL
INSTALLATIONS
Fan in Dry Air Stream—
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Housing — Stainless
Steel Eliminators.
COMPLETELY
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Los Angeles 54, Calif

customarily keep showing the prices which you charge for commodities or services. You must retain these records for two years.

7. Records showing clearly the basis upon which you have determined the ceiling price for any commodities or services not delivered by you or offered for delivery during the "base period".

If you are a retailer, you are required to preserve your purchase invoices and to record on them both your initial selling price and the section of the General Ceiling Price Regulation under which you have determined your ceiling price.

These records must be kept where you can furnish them for inspection, if required, by a representative of the Director of Price Stabilization. So be sure to hang onto them; they may save you a lot of unnecessary grief.

Are Air Conditioners "Personal Property?"

Is an air conditioning unit "personal property" within the meaning of NPA Order M-4, the regulation governing construction?

The order defines personal property as "property . . . which does not become a part of, the building, structure or project in the sense of its becoming a permanent part of the real property upon which it is located or in which it is installed".

Under this definition, it would appear that packaged-type units (store cooling units, for instance) would not come under provisions of the order. Central-type systems, on the other hand, apparently would be covered by the order.

The order includes a section providing that small jobs of new construction and alterations, additions, improvement and modernization are allowed without special authorization by an NPA field office, if the work doesn't amount to more than \$5000 for any consecutive 12-month period.

This \$5000 "ceiling" applies to construction cost only. This is "the total expense for building materials, building equipment, labor and services used on the construction of the particular building, structure or project . . . but does not include the installed cost of *personal property*".

Refrigeration contractors contend that packaged-type units should be classed as "personal property", be-

HORMEL FREEZER PLANT INSULATED WITH RUBATEX INSULATION HARDBOARD

RUBATEX Insulation Hardboard with aluminum reflective face being installed in the Hormel Freezer Plant in Fremont, Nebraska



K FACTOR 0.21

DOES NOT ABSORB MOISTURE

DOES NOT DETERIORATE

REQUIRES NO MAINTENANCE

LOWEST COST OVER THE "LONG PULL"

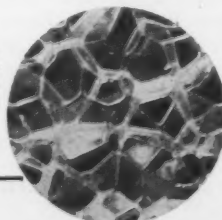
The exceptional insulating properties of RUBATEX Insulation Hardboard, plus its permanency, have resulted in this material being selected by George A. Hormel & Company for its new Fremont, Nebraska, plant.

RUBATEX has a K factor of 0.21 which remains unchanged indefinitely. Its closed cell structure cannot absorb moisture and will not settle nor crumble. RUBATEX has excellent structural

strength, yet weighs only 4½ lbs. per cubic foot. It resists oxidation and is rot, vermin and termite proof.

If you have a low temperature insulation problem, you should have the facts about RUBATEX Insulation Hardboard and the engineering services available. For further information, write for Design Data Bulletin RBH-1-50. Great American Industries, Inc., RUBATEX DIVISION, BEDFORD, VIRGINIA.

CLOSED CELLS shut out heat, cold and moisture. Photo-micrograph of a section of RUBATEX Insulation Hardboard shows the dense structure of individually sealed cells which give this product its exceptional insulating properties.



RUBATEX[®] INSULATION HARDBOARD

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CONTRACTORS

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cause they do not become a permanent part of the structure in which they are installed. Many packaged-type jobs, in fact, have been sold on this basis to shops which were not owners of the premises they occupied—dress shops, for instance.

They do not argue about the duct work, piping, etc. This might be considered a permanent part of the building. But not the packaged air condi-

tioning unit, they say. The cost of the unit itself should not be included in determining the \$5000 "ceiling" which regulates whether or not NPA authorization is required.

Right now, some contractors report that district NPA offices themselves are not certain as to how this question should be handled. In the absence of definite instructions to the contrary, most of them are ruling that packaged-type units come within the \$5000 "ceiling". This means that a great many more jobs will come under NPA scrutiny, of course.

BRANSKY HEADS CHICAGO COOLING CONTRACTORS

Harry L. Bransky of Bransky Refrigeration Co. has been elected president of the Refrigeration and Air Conditioning Contractors Association of Chicago for the coming year.

Other new officers elected by the group are: B. J. Pruyn, Refrigeration Service Co., vice president; Earl A. McLean, Merchants Commercial Refrigeration Engineering Sales, secretary-treasurer.

New directors of the organization include: Myer Axelrod, Continental Refrigeration Service; Alphonse Gerat, A. G. Refrigeration Sales & Service, Inc.; Harvey O. Miller, Murphy & Miller, Inc.; H. J. Prebensen, Air Comfort Corp.; T. J. Reedy, North Town Refrigeration Corp., and Albert G. Weil, Refrigeration Maintenance Corp.

Former president George T. Howe of Accurate Electric Refrigeration Service, Inc., will serve as director for the coming year.

CERTIFICATION NEEDED TO GET COPPER TUBING

A number of things about the copper Conservation Order, M-12, are anything but clear.

There are a number of doubts, for instance, as to exactly how much the order allows in the way of copper in the manufacture of a number of refrigeration components. These problems have been submitted to NPA for interpretation. However, here are some requirements of the order, insofar as they affect refrigeration contractors, dealers and service companies, that are relatively clear:

1. Copper tubing is definitely covered by the terms of the order. This means that any person who buys copper tubing must furnish to the seller a signed certification as follows:

"The undersigned, subject to statutory penalties, certifies that acceptance of delivery and use by the undersigned of the copper forms or products herein ordered will not be in violation of NPA Order M-12."

2. According to an interpretation cleared through REMA counsel and the copper division of NPA, it is not necessary for manufacturers of copper fabricated products such as valves and fittings to obtain from their customers a signed certificate of the type required in Section 11, paragraph (b) of order M-12. This is the same certification published above.



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For high insulating and adhesive qualities, use GILMER TAPE. Fuses readily without heat. Straight-tearing, non-raveling. In special shop-size containers.

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V-Belt business is profitable—easy to handle—the low-investment Gilmer way! Start with Gilmer #355 V-Belt Assortment. Contains 50 hard-pulling, firm-gripping, highly flexible belts—31 of the most popular sizes.

Gilmer V-Belts are built for hard service and long wear. Rayon pulling cords add strength, assure closely-controlled stretch. Long-life rubber cushion withstands heat. Tough jackets resist effects of air, gases, moisture, oil, dirt.

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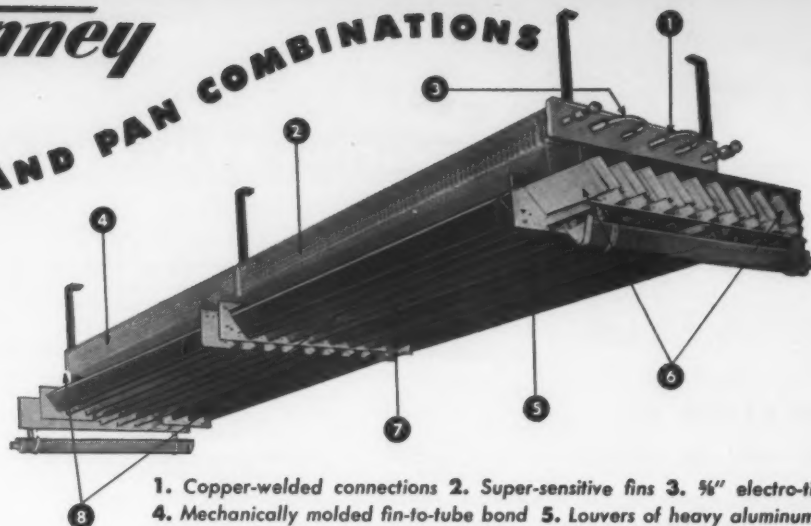
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Tenney

COIL AND PAN COMBINATIONS



1. Copper-welded connections 2. Super-sensitive fins 3. $\frac{3}{8}$ " electro-tin-plated tubing 4. Mechanically molded fin-to-tube bond 5. Louvers of heavy aluminum alloy 6. Scientifically placed louvers for improved air circulation 7. Louvers temperature-equalized to prevent dripping 8. Adjustable pull hook hanger for easy installation and cleaning

Coils And Coil & Pan Combinations For 8 ft. Walk-In-Coolers

				COIL AND PAN COMBINATIONS			COILS ONLY				
BOX SIZE	BTU/HR 15" TD	SQ. FT. SURF.	NO. COILS	MODEL NO.	DIMENSIONS IN INCHES			MODEL NO.	DIMENSIONS IN INCHES		
					D	W	L		D	W	L
5 x 4	2496	161	1	548P	13	24	46	C548	7	21	40
5 x 5	3094	199	1	558P	13	27	48	C558	7	24	42
6 x 4	3120	201	1	648P	13	24	54	C648	7	21	48
6 x 5	3225	206	1	658P	10½	38	57	C658	3	35	50
6 x 6	4160	234	1	668P	13	32	54	C668	7	28	48

Coils And Coil & Pan Combinations For 10 ft. Walk-In-Coolers

				COIL AND PAN COMBINATIONS			COILS ONLY				
BOX SIZE	BTU/HR 15" TD	SQ. FT. SURF.	NO. COILS	MODEL NO.	DIMENSIONS IN INCHES			MODEL NO.	DIMENSIONS IN INCHES		
					D	W	L		D	W	L
5 x 4	2925	192	1	541P	13	35	40	C541	7	31½	33
5 x 5	3861	249	1	551P	13	35	47	C551	7	31½	41
6 x 4	3432	220	1	641P	13	24	58	C641	7	21	52
6 x 5	3780	242	1	651P	13	24	57	C651	7	21	50
6 x 6	4570	292	1	661P	13	32	58	C661	7	28	52

A complete range of standard sizes • Special sizes built to order

14 x 12	12000	614	2	1248P	10 $\frac{1}{2}$	32	135	C1248	3	28	128
14 x 14	12075	710	2	1448P	10 $\frac{1}{2}$	38	126	C1448	3	35	119
16 x 8	9240	535	2	1688P	10 $\frac{1}{2}$	24	154	C1688	3	21	148
16 x 10	10492	618	2	1608P	10 $\frac{1}{2}$	24	176	C1608	3	21	170
16 x 12	12636	783	2	1628P	10 $\frac{1}{2}$	24	176	C1628	3	21	170
16 x 14	14256	825	2	1648P	10 $\frac{1}{2}$	24	176	C1648	3	28	170

14 x 12	12480	777	2	1241P	10 $\frac{1}{2}$	32	134	C1241	3 $\frac{1}{2}$	28	128
14 x 14	13125	766	2	1441P	10 $\frac{1}{2}$	38	135	C1441	3 $\frac{1}{2}$	35	128
16 x 8	11544	716	2	1681P	10 $\frac{1}{2}$	24	162	C1681	3 $\frac{1}{2}$	21	154
16 x 10	11880	689	2	1611P	10 $\frac{1}{2}$	32	149	C1611	3 $\frac{1}{2}$	28	143

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Tenney brings you the advantages of advanced engineering, of manufacturing facilities that can handle any and every job. A line that is complete in every detail. Remember, you always get more from Tenney. Literature and further information on request. Write to Tenney Engineering, Inc., Dept. F 26 Avenue B, Newark 5, New Jersey.



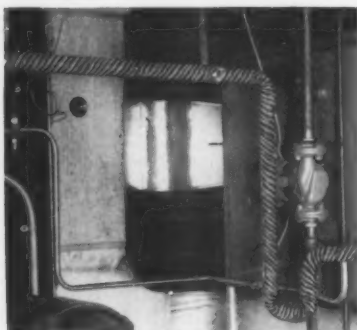
Tenney
Manufacturers of Automatic Temperature,
Humidity and Pressure Control Equipment



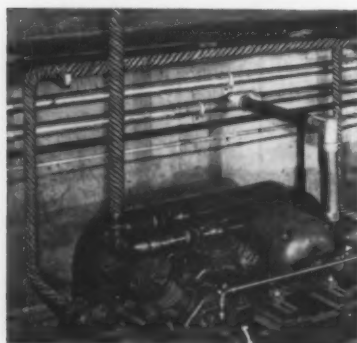
Positively Controls CONDENSATION DRIP

Prevents rust and corrosion, thus prolonging pipe life.

Just wrap cork-filled NoDrip Tape around cold water pipes, suction lines and joints running from refrigerating machines to condensers. Also used on refrigerant lines in air conditioning systems and on cold water pipes in basements.



NoDrip Tape is effective immediately. It can be painted. Clean and easy to put on, without tools, brads, etc.



CONTRACTORS: Include NoDrip Tape protection in your estimates, not only to stop dripping, but for the sake of good appearance on finished installations.

Roll covers about 10 feet of $\frac{1}{2}$ " pipe. \$1.69 list. Higher west of Rockies and Canada. Order through your supply house or write for information.

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66

USEFUL

BULLETINS • BOOKLETS • CATALOGS

The publications listed below are available to readers without charge. Simply circle on the postcard in this issue the key numbers of the items you wish to receive. Your requests will be forwarded directly to the companies concerned.

Compressors and Condensing Units . . . A complete catalog of the line of condensing units, compressors, coils, and condensers produced by Reliance Refrigerating Machine Co. for commercial and industrial refrigeration and industrial and comfort air conditioning applications. Each model is illustrated and described on separate catalog sheets. A separate section of capacity tables is included.

Circle No. 100 on Reader Service Card

Ice Cream Freezers . . . A colorful new brochure (No. 751) illustrating and describing the 1951 line of continuous custard and batch ice cream freezers offered by Mills Industries, Inc. New features of these units are outlined. Detailed charts show monthly custard profits and gross income by weight.

Circle No. 9 on Reader Service Card

Evaporative Condensers . . . A 4-page catalog insert (Catalog No. 600) illustrating and describing a line of evaporative condensers for Freon-12, Freon-22, methyl chloride produced by McQuay, Inc. Rating tables are included and detailed selection data is presented for both single and split circuit units.

Circle No. 102 on Reader Service Card

Flexible Bellows . . . Selection and application of "Flexon" bellows and bellows assemblies is the subject of this 16-page catalog (CMH-113) available from Chicago Metal Hose Corp. and of interest primarily to designers and manufacturers. Detailed specifications of each model are provided.

Circle No. 103 on Reader Service Card

Ice Builders . . . Practical as well as technical aspects of the use of ice builders to provide economical sweet water cooling is the subject of a completely new 8-page booklet available from Creamery Package Mfg. Co. It explains why ice builders require less horsepower than brine or direct expansion systems and indicates typical conditions in which use of an ice builder is advantageous. Specifications and descriptions of various capacity ice builders also are included.

Circle No. 104 on Reader Service Card

Cooling Towers . . . A 4-page bulletin describing the line of cooling towers manufactured by Aqua-Therm, Inc. Bulletin describes how the use of chemical stone-ware saddle type fill, heretofore used primarily in scrubbing towers, provides greatly increased surface area in relation to total volume. Technical data and a specimen cooling tower problem also are presented.

Circle No. 105 on Reader Service Card

Motors and Generators . . . A 19-page booklet (B-4595) describing the new Life-Line type SK dc motors and generators, available from Westinghouse Electric Corp. It shows how the new design uses rolled steel frames, heavy steel brackets, steel angle feet and prelubricated double-seal ball bearings to provide added strength and long life. Booklet pictures and discusses various construction features of the equipment, and describes types, enclosures and mountings for many different applications.

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FIRST in the field... JARROW PRODUCTS

* SPEED-ANGLE CHARGING HOSE



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Speeds up charging and purging. No Flexing necessary. Hose life is prolonged by eliminating sharp "right-angle" bends. Gaskets cannot blow out.



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Dependability...

PROVED BY TIME!

Kelvinator Open-Type Condensing Units

Right now, when **DEPENDABILITY** is the "buy-word" of refrigeration customers—give them **DEPENDABILITY**. **PLUS** with Kelvinator! Selling Kelvinator condensing units, you sell equipment backed by 37 years of efficient, reliable performance. Long life is literally engineered and built right into Kelvinator products. And if, after years of service, repair parts are needed—you and your customers can depend on your Kelvinator Parts Depot to supply them—promptly and at reasonable prices.

Check Kelvinator's complete range of open-type condensing units—from $\frac{1}{4}$ H.P. to 5 H.P. See how Kelvinator's extra-value, wide selection line exactly meets your customers' needs. Make sure of satisfied customers and repeat business... sell Kelvinator on your next new or replacement jobs.

For complete information, call your nearest distributor or Zone Office. Kelvinator, Division of Nash-Kelvinator Corporation, Detroit 32, Michigan.

A selection of 10 Kelvinator
Hermetic Models up to and including
 $\frac{1}{2}$ H.P. is also available.



PROFIT TODAY...BUILD FOR TOMORROW WITH

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THE NAME THAT SELLS...THE NAME THAT SATISFIES!



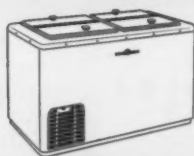
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BEVERAGE COOLERS**



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AIR DRIER**

and **AIR CONDITIONING** • **APRIL, 1951**

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AND *Economy*

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UPRIGHT FREEZER

15 Cubic Feet

Scientific placement of cooling coils, two separate food compartments, dual doors to minimize cold loss, insure balanced freezing at minimum cost.



KUBEMASTER ICE CUBE MAKER

Whenever food or refreshment is served, ice cubes as you need them. Choice of 3 beautiful models.



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Engineered to serve beer to the "Brewmaster's" taste. Its smart appearance enhances any establishment. Choice of 8 models in Stainless steel or brown Dulux finish.



REACH-INS

Modern flush fronts with recessed handles in popular sizes. Ten models to choose from. Available in white Dulux, stainless steel fronts and glass doors.



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By

**UNITED
REFRIGERATOR
COMPANY**

Locust and Walnut Sts.
HUDSON, WISCONSIN

Circle No. 49 on Reader Service Card

NEW PRODUCTS

For further information on any of these products, simply circle on the postcard provided in this issue the key numbers of the items in which you are interested. Your requests will be forwarded directly to the companies concerned.

Ice Cream Merchandiser

Product: Model OF-9M low temperature cabinet for merchandising packaged ice cream, frozen food specialties, and related products.



Manufacturer: Jordon Refrigerator Co., Inc., Philadelphia, Pa.

Features: Thermopane display glass front and a new type shelf superstructure for display of related non-refrigerated items such as sundae toppings, jiffy bags, cake cones, and other bakery products. Designed with exceptionally heavy duty refrigeration system using refrigerated divider plates making partitions that will accommodate pints, quarts, and half-gallon ice cream packages, as well as fancy molds and other specialties. Intended especially for use as a "home refreshment center" in food markets and drug stores.

Circle No. 130 on Reader Service Card

Room Air Conditioners

Product: New line of room air conditioners.

Manufacturer: Fedders-Quigan Corp., Buffalo.

Features: Leader in line of five window type air conditioners and six console models is the unit illustrated, a one-third ton model which is especially engineered and styled for use in bedrooms. Listed as Model WH14, the unit will retail for \$249.95, low-

est priced room air conditioner ever produced by Fedders. Other four window models have full half-ton and three-quarter ton cooling capacities. Console models have capacities from three-quarter ton to 1½ tons.

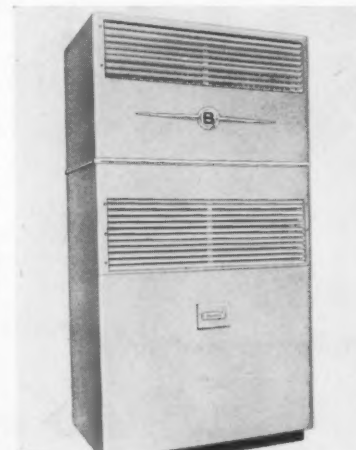
Circle No. 131 on Reader Service Card

Air Conditioners

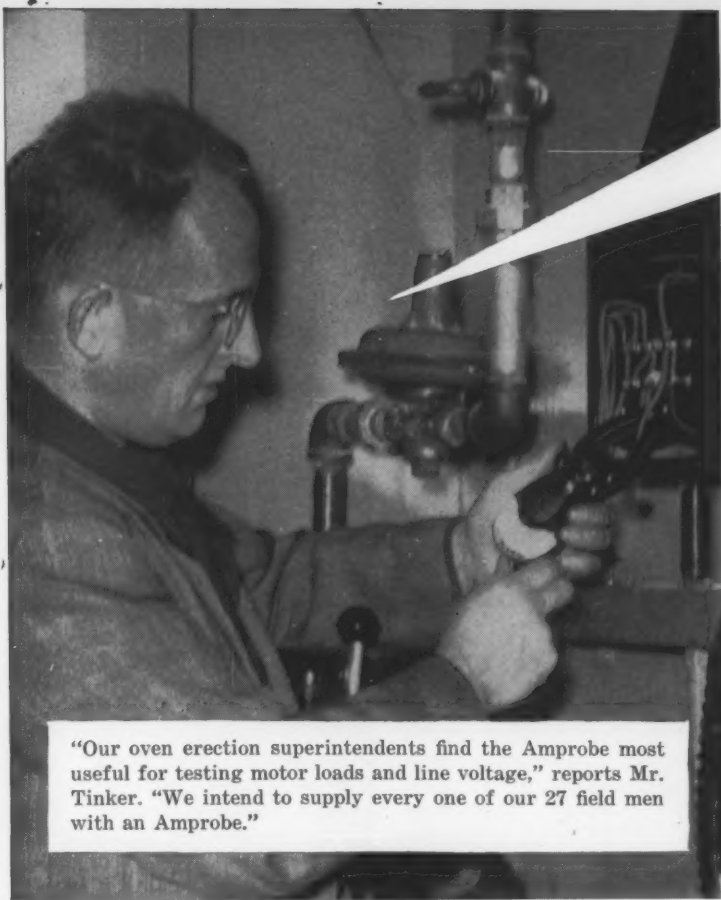
Product: 1951 line of Brunner packaged air conditioners in 3, 5, 7½, and 10-hp sizes.

Manufacturer: Brunner Mfg. Co., Utica, N. Y.

Features: Air discharge plenum designed for most efficient air distribution and can be equipped with heating oil if desired. Motor driven centrifugal type fan with entire unit cushioned for near silent operation. Double section cabinet, rubber cushioned, concealed at front by chro-



mium trim. Air intake filters easily removed for cleaning and economically replaced when necessary. Cooling coils located directly behind filters. Cabinet fully insulated. Compressor is suspension mounted, with all parts fully accessible. Automatic controls. Brunner slow-speed compressor is belt driven from motor.



"Our oven erection superintendents find the Amprobe most useful for testing motor loads and line voltage," reports Mr. Tinker. "We intend to supply every one of our 27 field men with an Amprobe."

**"20 AMPROBES
ALREADY
BEING USED
BY OUR FIELD
SUPERINTENDENTS"**
writes W. G. Tinker,

*Service Manager,
The Petersen Oven Company,
Franklin Park, Ill.*



\$49⁵⁰ complete with
genuine top grain cow-
hide leather case and
voltage test leads.

WHAT OTHER USERS SAY:

"Very handy for a quick check on motor loads without any shut-down time."—Ed. J. Wynne, Elec. Foreman, Walter Baker Division, General Foods, Dorchester 24, Mass.

"The Amprobe is an essential piece of our testing equipment for checking transformers and motor currents."—Milton H. Chase, Mgr., Homestead Utilities, Prudence Island, R. I.

"It's the answer to a majority of trouble tests."—A. R. Akins, Maintenance Foreman, G. S. Suppiger Co., 800 So. Morrison Ave., Collinsville, Ill.

"Would not want to be without it."—R. H. Heinze, owner, Heinze Refrigeration Company, 114 N. 13th St., Fort Dodge, Iowa.

AMPROBE—THE SNAP-ON VOLT-AMMETER THAT FITS IN YOUR POCKET!

Reads current without interrupting circuit or breaking insulation

Look what you can do with this one pocket-size tool: Determine load conditions instantly without having to shut down equipment. Spot motor overloads and underloads. Diagnose trouble calls faster, under actual load. Check line voltage and drops. Set overload relays, etc.

- So compact, it fits in your pocket.
- $\frac{1}{4}$ the usual size—only 7".
- $\frac{1}{2}$ the usual weight—only 14 oz.
- Accuracy: $\pm 3\%$ (of full scale deflection).
- Field-proved and accepted—tens of thousands in daily use today.
- About $\frac{1}{2}$ the usual price.



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this 16-page manual**

CB-4
PYRAMID INSTRUMENT CORP.
49 Howard Street
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Please send me your new 16-page Manual—"HOW TO MAKE YOUR JOB EASIER WITH AN AMPROBE."

Send literature on Amprobe Sensitizer and Split Plug.

(print your name, company and address in the margin)

AMPROBE 10X SENSITIZER



Effectively gives the Amprobe 3 additional ranges: 0-1 AMPS.

0-2.5 AMPS. **\$375**
0-5 AMPS.

Model A-6 measures 5 A.C. current ranges: 10/25/50/100/250 amperes; plus 2 A.C. voltage ranges: 150/600 volts. Two other models available.

AMPROBE®

A PYRAMID INSTRUMENT

See it today at the better electrical distributors

Rubber mountings and flexible connections between components. Cabinets have soft gray finish over bonderized sheet steel.

Circle No. 14 on Reader Service Card

Fastening Device

Product: Small inexpensive metal fastening device known as "Thumbweld".

Manufacturer: American Shower Door Co., Los Angeles, Calif.

Features: Designed primarily as a permanent fastener where rapid as-



sembly or disassembly is important, or to replace screws or bolts securing parts that are occasionally removed for service or inspection, such as access plates, metal housings, instruments, etc. Applies from one side and

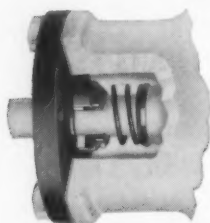
needs only drilling of a 3/16-inch hole. Thumb pressure alone is sufficient to lock it in place. Once locked, fastener grips as securely as a metal screw or bolt and will not jar loose. To release, a quick pry with a screw driver or thumb nail is sufficient. Will be available for hole sizes ranging from 1/8 to 1/2 inch and for metal thicknesses up to 1/2 inch.

Circle No. 133 on Reader Service Card

ROTARY SEAL

Replacement Units

- ✓ Simple in Construction
- ✓ Easy to Install
- ✓ Efficient in Operation
- ✓ Economical



Unit No. 4120

**AVAILABLE FOR
MORE THAN
900
COMPRESSOR
MODELS**

For Commercial, Semi-Commercial, Air Conditioning, and Household Refrigerator Compressors....over 20 years of performance proof....Units available for all standard makes.



AT
ALL

LEADING
JOBBER'S

"Seal with

Certainty!"

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CHICAGO 14, ILLINOIS, U.S.A.**

**CANADIAN AGENT: 2025 ADDINGTON AVENUE
MONTREAL 28, QUEBEC, CANADA**

Circle No. 51 on Reader Service Card for more information

Reach-In Boxes

Product: 1951 line of reach-in refrigerators.

Manufacturer: United Refrigerator Co., Hudson, Wis.

Features: Three models avail-

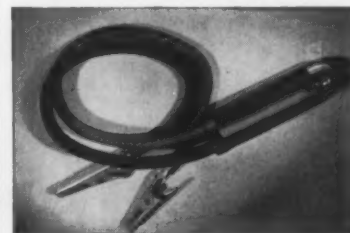


able: 21-cu.ft. box, self contained; 31-cu.ft. box, self contained or remote; and 42-cu.ft. box, remote only. Flush fronts with recessed handles. Interiors all have acid, grease, abrasion, and chip resistant finish with stainless steel bottom pan. Available with white Dulux enamel exterior or with stainless steel fronts and matching gray Hammerloid sides.

Circle No. 134 on Reader Service Card

Test Light

Product: "Lo-Volt" test light featuring greater voltage range and especially adapted for use with low



voltage controls such as thermostats.

Manufacturer: Industrial De-



SILVALOY

... can help to solve these production problems for you!

Here is a partial list of production problems that solve successfully with Silvaloy Silver Brazing Alloys. Check this list—if you locate your problem here (or if you have a similar metal joining problem) make it ours without obligation, by writing us today for a technical consultation. ★ ★ ★ ★

CHECK THIS LIST!

To join dissimilar metals.

To join tubular assemblies.

To seal gas, liquid, or airtight joints in pressure vessels or systems.

To make joints that require good appearance with no finishing operation.

To make joints that must be ductile.

To obtain joints with best electrical conduction.

To join two surface areas.

To avoid metallurgical or practical difficulties caused by temperatures used in a welding process.

To join complicated assemblies, especially where the joints are inaccessible.

To make many joints simultaneously.

To complete a series of joints in steps.

To adapt to a mechanized heating operation the joining of a large production item.

D I S T R I B U T E D B Y :

THE AMERICAN PLATINUM WORKS
NEWARK, N. J.

EAGLE METALS COMPANY
SEATTLE, WASH. • PORTLAND, ORE.
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THE AMERICAN PLATINUM WORKS

231 NEW JERSEY RAILROAD AVENUE, NEWARK 5, NEW JERSEY



vices, Inc., Edgewater, N. J.

Features: Plastic bulb lights up brightly on any voltage from 3 to 25 volts ac or dc. A second model covers range from 6 to 50 volts. Encased in plastic housing that will withstand the most rugged use. Flexible leads 10 inches long have heavy durable coverings and terminate in convenient spring clips. Light may also be used with battery supply to test for continuity.

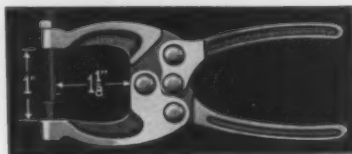
Circle No. 135 on Reader Service Card

**BUY FROM YOUR
REFRIGERATION WHOLESALE**

Plier-Type Toggle Clamp

Product: "De-Sta-Co" No. 424 plier-type toggle clamp.

Manufacturer: Detroit Stamping Co., Detroit, Mich.



Features: Light, compact, portable. Fast-acting clamp is particularly suitable for sheet metal work

and for holding metal, wood, or plastic parts during machining, welding, and cementing operations. Provides positive holding pressure with firm toggle locking action. Weighs only 5 ounces, making it ideal for one-hand use. Extreme compactness and overall length of only 4½ inches allows use in restricted working area. Handles and jaws are forged high-alloy steel; bearing pins are long-wearing stainless steel.

Circle No. 136 on Reader Service Card

*"It's a pleasure
to sell testing equipment
that stays sold..."*



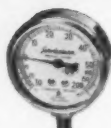
That's the gist of what Bill Kramer of Chase Supply Co. was saying to Frank Zicarelli of Marsh Instrument Co. when this picture was snapped in this well known supply house.

On the firm foundation of quality products backed by prompt, friendly service, Chase Supply Co. has built a thriving business out on West 119th Street on Chicago's South Side. Mr. Kramer and associates who take care of counter, phone and mail sales say that Marsh products are the kind they like to sell. "We have lots of calls," they report, "for gauges, thermometers and controls from refrigeration men who tell us they can depend on Marsh equipment."

There is a Bill Kramer in your locality who would like to supply you with Marsh instruments and Marsh-Electrimatic Valves. Wholesalers, South, North, East and West, like Marsh products because their customers like them, and the customers like them because they do their job supremely well. Some of the popular products are described here. Again we say:

See your jobber

MARSH INSTRUMENT CO.
Sales affiliate of Jas. P. Marsh Corporation
Dept. P. Skokie, Ill.



Here is the team for the man who wants the ultimate in testing gauges.



All there is in testing thermometers—the 4-scale "Serviceman."

Type WP Marsh-Electrimatic—one of many regulators, suction throttling and flow control valves.



WRITE FOR BULLETINS

Touch-Up Paint

Product: Touch-up enamel and paint available in self-contained dispensing can under name of "Spray-O-Namel."



Manufacturer: Illinois Bronze Powder Co., Chicago, Ill.

Features: Designed for handily touching up refrigerator or air conditioner cabinets or painting louvers, ducts, vents, or piping. Sprays directly from can by simply pressing the button on top of container. Every drop expelled from pressurized can in fine spray. Removable "Presto-Matic" spray head prevents clogging and eliminates finger fatigue. Available in 20 colors, including white, aluminum, and clear plastic.

Circle No. 72 on Reader Service Card

Combination Cooler

Product: "Sterling P-60" combination self-serve dairy refrigerator and walk-in cooler.

Manufacturer: Minneapolis Show Case and Fixture Co., New Richmond, Wis.

Features: A combination unit that requires only 36 sq. ft. of floor area but provides both display and storage facilities. Constructed in only two easy-to-assemble sections, each

MARSH

Refrigeration Instruments

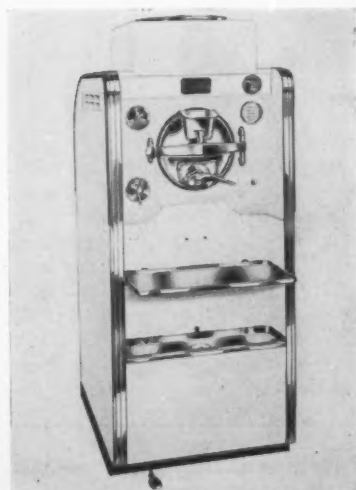


of which will clear a standard 36-inch door. An "add-a-section" unit is also available in depths of 2 and 3 feet. This permits enlarging the cooler as requirements demand. Equipped with porcelain front and brilliant fluorescent illumination. Manufactured in three different front arrangements, featuring either extruded aluminum swing type doors or hard rubber sliding doors. Entrance door can be furnished on either right or left side of cooler. It is available in both remote and self-contained models to meet each individual requirement. Self-contained models are complete with coil and pull-out condensing unit installed.

Circle No. 138 on Reader Service Card

Gravity-Fed Freezer

Product: New lower cost gravity-fed frozen custard and batch ice cream freezer.



Manufacturer: Mills Industries, Inc., Chicago, Ill.

Features: Thirty inches of stainless steel piping delivers the mix from the 5-gal. refrigerated hopper to the freezer barrel. Any desired rate of mix up to approximately 15 gph can be delivered by adjusting the simple flow control dial. Hopper is easily cleaned in position. Side cabinet may be added for mix storage if desired. Extra-heavy drive head gives greater strength for lower temperatures. Sanitary new draw-off custard spigot. New 2-hp agitator drive motor for

extra low temperature custard operations is interchangeable.

Circle No. 9 on Reader Service Card

Spinner Wrenches

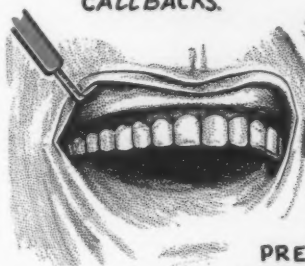
Product: New series of seven spinner wrenches.

Manufacturer: Bonney Forge & Tool Works, Allentown, Pa.

Features: Composition handles are fluted to provide firmer grip. Designed especially for reaching small nuts that can be handled only with exceptionally small sockets.

'Frigeration Facts

CLEAR UP FREEZE-UP TROUBLE EVEN AT 40° BELOW ZERO WITH MOST THOROUGH METHOD. THAWZONE ACTUALLY DESTROYS MOISTURE. MOISTURE CANNOT EXIST IN CONTACT WITH THAWZONE. FEWER PROFIT-KILLING CALLBACKS.



WEAK ACIDS

CAUSE DECAY OF TEETH AND CORROSION OF REFRIGERATION PARTS.

THAWZONE NEUTRALIZES WEAK ACIDS AND HELPS

PREVENT CORROSION OF VALVE PLATES AND COPPERPLATING.

WORKS DURING BOTH ON AND OFF CYCLES.

THAWZONE®

THE ONLY PRODUCT THAT DESTROYS WATER AND REACHES ALL OF IT

1. Thawzone circulates to ALL the moisture.
2. It destroys moisture.
3. It neutralizes acids. Thawzone overcomes freeze-ups sooner and keeps the unit running without another freeze-up after you leave. Handles the moisture problem in any "Freon" or methyl chloride unit. You need only ¼ oz. per pound of refrigerant. At your wholesaler, Highside Chemicals Co., Clifton, N. J.



Circle No. 54 on Reader Service Card for more information

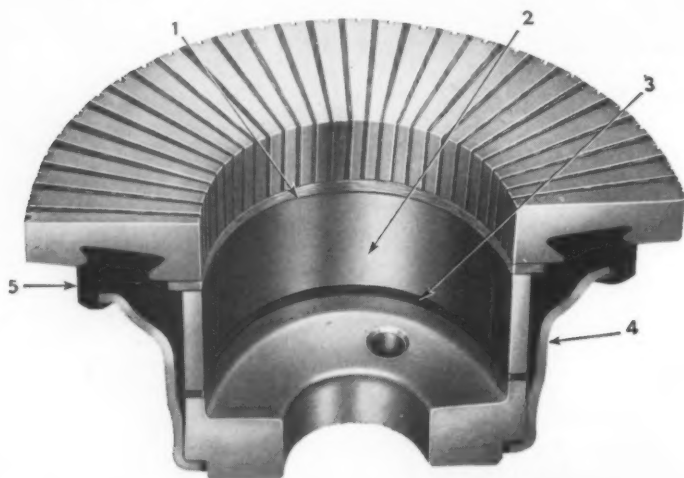
Genuine Joe says:

YOU CAN'T BEAT Wagner COMMUTATORS*

They're "tops" because their rugged design means extra strength and permits refacing with safety. All Wagner Commutators are high-speed tested . . . they're built to last.

Write for Fast-Moving Parts Bulletin MU-122 and Motor Parts Catalog MU-40. Every repair shop needs these helps.

**and here's why...*



1. A mica washer insulates the commutator from the short-circuiting ring.
2. Short-circuiting ring is made of brass.
3. Bakelite washer insulates the short-circuiting ring from commutator hub to eliminate harmful shaft currents.
4. Steel reinforcing shell provides extra strength.
5. Entire assembly is molded in high impact phenolic molding compound.



WAGNER ELECTRIC CORPORATION
6442 Plymouth Ave., St. Louis 14, Mo., U. S. A.

MOTORS • BEARINGS • STANDARD ROTORS
BRUSHES • CAPACITORS • COMMUTATORS

**650 AUTHORIZED SERVICE STATIONS
OR PARTS DISTRIBUTORS**

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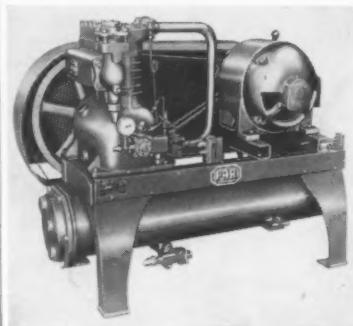
Made like a screw driver with a hexagon socket that grips the nut firmly. Wrenches with hexagon openings of 3/16, 1/4, 5/16, and 11/32 inch are 6 inches in length and have a drill depth of 2 1/4 inches. The 3/8, 7/16, and 1/2-inch wrenches are 6 5/8 inches overall and have a 5-inch drill depth. Shanks and sockets have plated finish. Available singly or in sets.

Circle No. 140 on Reader Service Card

Heavy Duty Units

Product: 10 and 15-hp "Par" water cooled condensing units, to round out line.

Manufacturer: Lynch Corp., Toledo, Ohio.



Features: Suitable for commercial refrigeration and air conditioning applications, these units are designed to give heavy duty service. Feature V-belt drive with safety guard, dual pressure control, magnetic starter with thermal overload protection and water regulating valve mounted on a heavy base. Uses Freon-12 refrigerant.

Circle No. 142 on Reader Service Card

5-in-1 Tester

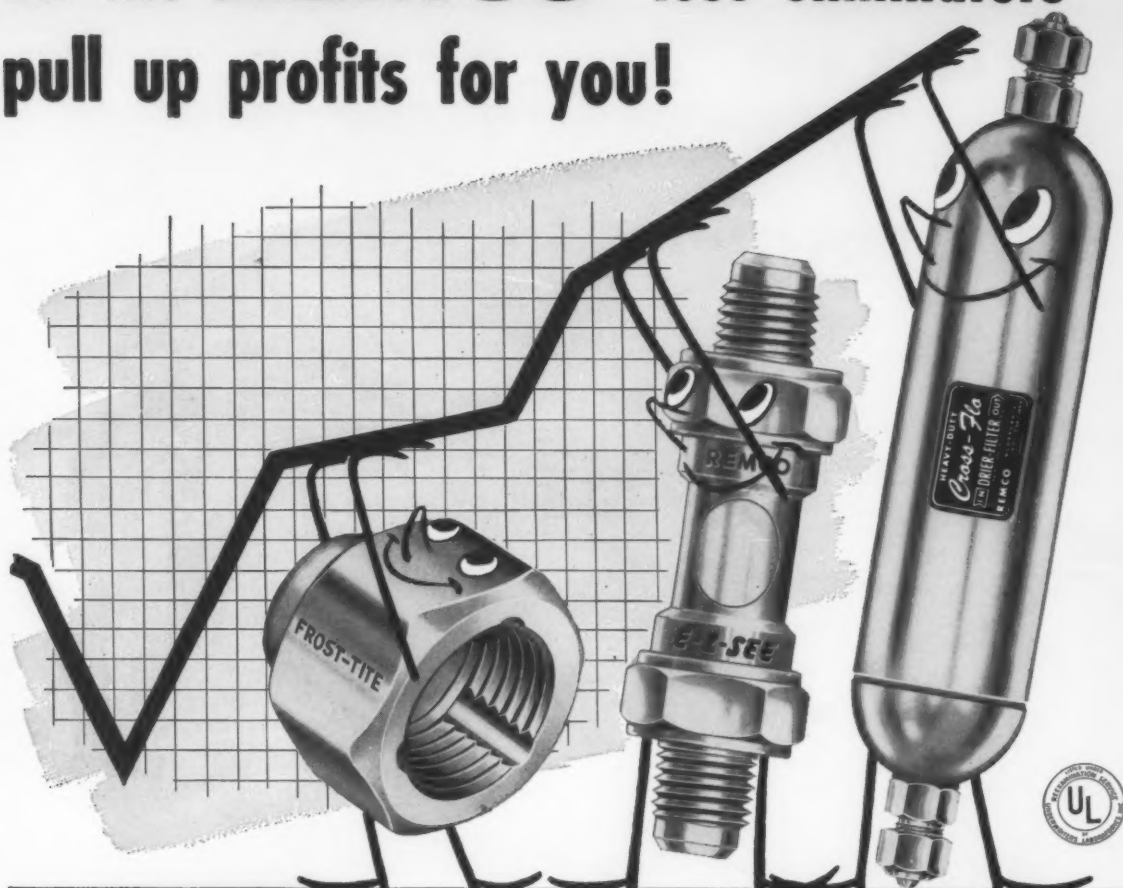
Product: Model R-50 5-in-1 appliance and motor tester.

Manufacturer: Sealed Unit Parts, Inc., New York, N. Y.

Features: Will measure actual current consumption of appliances, sealed units, or any type of motor up to 2 hp in capacity while the unit is in operation. All calibration directly on meter. All tests can be made without breaking leads of unit under test. Special rugged current trans-

**BUY FROM YOUR
REFRIGERATION WHOLESALE**

Let the **REMCO** "loss eliminators" pull up profits for you!



FROST-TITE eliminates losses from loosened and cracked flare nuts —

In Frost-Tite flare nuts, forged frost-relief slots provide relief for expanding ice within the nut, and thus no force is created to cause loosening, splitting, or cracking. Cost no more than ordinary flare nuts—are ideal for use anywhere in the system.

E-Z-SEE eliminates losses from leaking liquid indicators —

With E-Z-See, you are assured of the following definite advantages: (1) E-Z to see thru—both sides of the body are open to let in light (2) Positively leakproof—can't leak because springs automatically maintain just the right force to form a positive seal around the glass (3) Perfectly Safe—glass is protected for safety at pressures up to 500 psi.

Cross-Flo eliminates losses from clogged driers and expansion valve freeze-ups —

In Remco's new heavy-duty Cross-Flo Drier-Filters, you get the highest-possible efficiency even at liquid temperatures up to 150°. You can now count on prevention of refrigerant control freeze-ups even in the lowest temperature installations.

— Send for Literature and Prices —

Be sure to specify REMCO "Standard-Duty" Driers as the ideal low-cost quality driers for field applications and original equipment. Available with Molded DuCal Drierite or Silica Gel.

CARRIED IN STOCK BY LEADING WHOLESALEERS EVERYWHERE

West Coast warehouse stock at: 2103 So. San Pedro, Los Angeles, Calif.
EXPORT DEPARTMENT: Melchior, Armstrong, Dessau—Ridgefield, N. J.



Circle No. 56 on Reader Service Card for more information
and **AIR CONDITIONING • APRIL, 1951**

keep your lines
in check with
valves by
SUPERIOR



You will soon appreciate the ease with which you can keep your refrigeration lines open—or shut—with perfectly engineered valves by Superior. For simple isolation of refrigerant or for complete shut-off of any part of the system, you can rely on quality Superior Line and Check Valves. Remember to specify Superior accessories for all your refrigeration and air conditioning jobs. For more information write us today for Catalog R3.

Let your local wholesaler do the entire supply job.

Superior valve and fittings co.

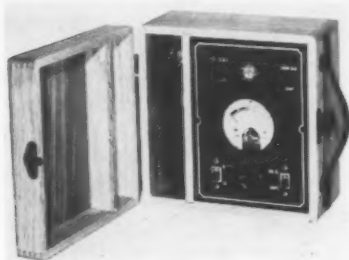
Pittsburgh 26, Pa.



Circle No. 57 on Reader Service Card for more information

APRIL, 1951 • COMMERCIAL REFRIGERATION

former is used for current ranges. Meter and current transformer will stand more than 300% overload. Special scale for checking sealed



units before plugging into power source to prevent blowing of fuses. Voltage ranges, 0 to 150 and 0 to 300 volts a.c.; current ranges, 0 to 3 and 0 to 15 amps a.c. Resistance 0 to 1000 ohms. Reads as low as $\frac{1}{5}$ ohm, with 10 ohms in center of scale, making possible correct testing of coils, armature windings, etc.

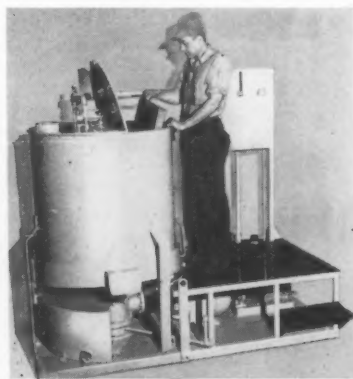
Circle No. 143 on Reader Service Card

Filter Cleaner

Product: "Safe-N-Ezy" filter washer-oiler.

Manufacturer: Paxton-Mitchell Co., Omaha, Neb.

Features: Opens new source of profits and customer service for air



conditioning service organizations. Machine cleans permanent type wire mesh filter elements at a speed many times faster and with less work than other methods generally in use. One man working at a normal rate of speed can clean and oil 600 or more filters in an 8-hour day. Works on principal of centrifugal action. Filters spin in interior basket throughout cleaning, rinsing, drying, and oil-

ing cycle. Machine occupies floor area of only 6 feet 10 inches by 4 feet 4 inches, so can be conveniently installed in out-of-way location in even small shops.

Circle No. 144 on Reader Service Card

Multi-Purpose Pump

Product: Small pump designed for such uses as a refrigeration pump, coolant pump, water circulator, and for other applications where it is desired to move water or soluble oils not under pressure.

Manufacturer: Taco Heaters, Inc., Providence, R. I.

Features: Will pump 10 gpm against a 3-foot head. Connections are made through 1-inch hole in inlet plate located below liquid level and a $\frac{3}{4}$ -inch N.P.T. outlet. Bronze body, bracket, and impeller; stainless steel shaft. Filter screen at intake. Operates quietly with no seals or lubrication required. Powered by 1/25-hp motor. Light in weight; low in cost.

Circle No. 145 on Reader Service Card

BUY FROM YOUR REFRIGERATION WHOLESALER



Moisture is no longer a Peril!

PROTECTION AVAILABLE WITH

DAVISON PA 100*

REFRIGERATION GRADE SILICA GEL

Moisture need no longer be a problem as PA-100 can insure moisture protection for you and your customers! Extensive tests, made under many varying conditions, show that PA-100 can dry refrigerants to moisture levels that cannot be reached by other refrigerant drying agents.

Being completely inert PA-100 cannot cause corrosion. Actually it halts the threat of corrosion . . . removes corrosive com-

pounds from the system.

No matter how long PA-100 stays in the system there is no danger of its dusting, caking, deliquescent, channeling refrigerants or causing any other undesirable reactions.

To insure the greatest protection for you and your customers . . . order your refrigerant drier by name . . . PA-100. Your jobber has it either in cartridge or bulk can.

*Reg. U. S. Pat. Off.

Progress through Chemistry

THE DAVISON CHEMICAL CORPORATION

Baltimore 3, Maryland

Pioneers and Developers of Silica Gel

CANADIAN EXCLUSIVE AGENTS FOR DAVISON SILICA GEL: CANADIAN INDUSTRIES LIMITED, SALES DIVISION, CHEMICALS DEPARTMENT

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now you can sell

STAINLESS STEEL

REFRIGERATORS

*at the **LOW COST** of white*



yes, YOU can sell 90% of the "reach-in" business in your territory with IPC's stainless steel refrigerators.

why?

Because IPC stainless steel refrigerators and dry bottle coolers are now being produced under *new* mass production methods AT THE SAME LOW COST AS WHITE REFRIGERATORS AND COOLERS.



IPC offers its dealers:

1. Greater profits
2. Increased sales
3. Exclusive territories
4. Maximum dealer discounts
5. Power unit by Servel
6. A model to fit EVERY NEED.
20 to 70 cubic feet • Self-Contained
and Remote • 24" and 32" depths.

**WRITE FOR PRICE
LIST AND FOR IN-
FORMATION ON
EXCLUSIVE DEAL-
ER TERRITORIES
STILL OPEN.**



INTERNATIONAL PRODUCTS CORPORATION

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Circle No. 59 on Reader Service Card for more information

COMPLETE PLANNING . . .

Continued from page 49

be approached separately. No buyer would have the patience to hear sales talks on each item as a separate promotion. In a complete store plan, however, each fixture is shown as it applies to the overall picture and is likely to be accepted or rejected on the merits of the master plan.

So far we have discussed store planning only as it affects the refrigerated end of things. Other items, of course, are part of this picture. Shelving, gondolas, counters, carts, etc., are also of extreme importance, since no store is complete without them.

Inasmuch as they are the least costly material in any complete installation, it is easy to see why many refrigeration dealers have overlooked their importance in the past. However, their effect and help in getting those desirable refrigeration sales on the dotted line cannot be overlooked.

Design for Traffic Flow

While good store planning is generally conceded to be a form of "merchandise engineering," there is no need for even the smallest refrigeration dealer to feel that it is beyond his understanding.

First of all, an easy flow of traffic is required. Aisles ranging from 5 to 6 feet wide are ideal for the average store. Leave wider openings at the meat and produce departments. At these points, shopping carts are "parked" while selections are made and troublesome traffic jams can easily occur in narrow lanes.

The placing of non-refrigerated units is determined by various factors, the most important of which is, naturally, the amount of space available for groceries.

Avoid Backtracking

For the refrigeration dealer who needs help on this point the accompanying diagrams, taken from a leaflet prepared by our organization and available without charge or obligation, should prove of considerable assistance. This data is simple and flexible enough to cover most situations. Our purpose is to promote intelligent store planning as the key to all equipment sales.

Generally speaking, the produce

department should be the last stop in the store. Such a location cuts down the amount of "backtracking" required for intelligent shopping. Produce is more easily bought when the main items are already taken care of. Also, the danger of smashed and bruised merchandise is eliminated, as the perishables are placed in the shopping cart on top of dry groceries which are in protective containers and do not spoil.

Better Planning—Bigger Profits

Logical position for check-outs follow a general pattern which is best explained by charts. Again we refer to the illustrations with this article which emphasize the importance of proper merchandise location.

It is more than coincidence that the most profitable equipment operations have found complete store planning the key to greater sales and profits, and that every major manufacturer of refrigerated food equipment is preaching the gospel of this new and intelligent approach to mass selling of their products.

Now is the time for extra effort in complete store planning. The additional profits to be made in non-refrigerated equipment are sizeable enough to warrant this important service, but a more important reason is simply this—complete store planning is part of the refrigeration business and it's here to stay!

Think of the Customer

In connection with complete store planning service, it is very important that the refrigeration man think primarily in terms of the retailer and of the retailer's interests. Learn the retailer's problems so that the plan when presented will show him that you understand his particular situation and that you are aware of the things which he would look for in his newly remodeled or newly opened store.

When you talk the food merchant's language, he becomes more sympathetic to your presentation. An impressive looking blueprint alone means nothing to the average grocer, since he is not a technical man. But an impressive looking blueprint explained in his language and with his problems in mind can easily become the central point for all his future equipment buying.

When the subject of non-refriger-

ated equipment comes up, be sure that you represent reputable manufacturers whose lines will speak for themselves. In this way you will avoid the grief that comes from promoting unsound merchandise. Be as choosy in this respect as you would be in recommending a mechanical unit to the customer.

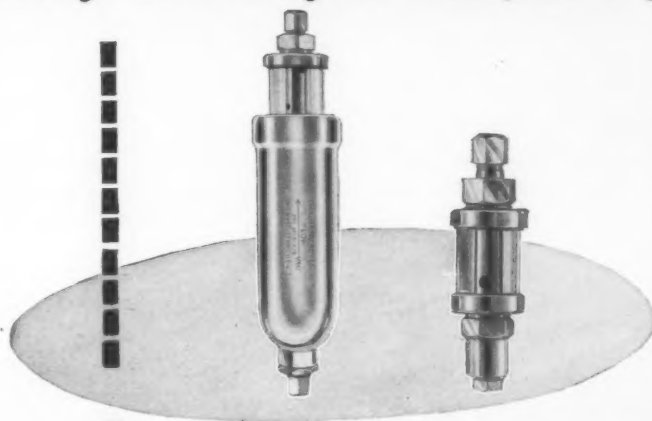
Keep your presentation simple. Do not try to oversell. A heavily mortgaged merchant is not a happy man and can never be used as a reference for future prospects to consult. If store planning is done right, your

customers will do a good deal of your selling for you.

Build for the future. Recognize your customer's problems and help solve them. Build good will by putting your service on a higher plane than your competitor's. Bigger sales and profits will be yours with far less effort per dollar's worth of volume.

A good motto for every dealer's sales meeting room would be—"Sell the whole store and you'll net a lot more!" Ask the man who does it—he's operating the modern way, the profitable way.

PROMPT DIAGNOSIS—NO LEAKS... every service job satisfactory



Makes Trouble VISIBLE

You don't guess — you KNOW — what is wrong, instantly, when you use Cee-Kleer, the **only** combination Sight Gauge-Drier on the market.

There's no searching in the dark because Cee-Kleer gives full 360° vision for fastest diagnosis of all operating troubles.

Cee-Kleer Driers trap sludge, wax, moisture and fine foreign particles. They are easy to clean and refillable — and there's not a **leaker** in a **carload** of them. Use this Cee-Kleer combination sight-drier on your next service job. Believe me, you'll continue using them to make **every** service job satisfactory.

Ask your Distributor for Cee-Kleer

If he cannot supply you, just use the handy coupon and we'll be glad to send you any size you need until your distributor's stock arrives.

Cee-Kleer
PRODUCTS, INC.
947 W. Sixth Street
Cincinnati 3, Ohio

Please ship.....	Cee-Kleer Sight-Driers; size.....
My Distributor is.....	
Name.....	
Address.....	

COMMERCIAL *Refrigerator* SALES NEWS

Believe Construction Order Won't Halt Essential Jobs

COMMERCIAL refrigerator dealers should not be seriously hampered by the limitations imposed by NPA Order M-4, the regulation applying to new commercial construction projects, in the opinion of Rufe B. Newman, Jr., acting director of the Construction Controls Division of National Production Authority.

Newman's belief was expressed in a reply to a letter addressed to NPA by the National Commercial Refrigerator Sales Association, urging that consideration be given to removing

food stores, super markets, etc. from List B of the order.

The order now requires authorization for construction (including "additions to", "extensions of", "alteration", etc.) of food stores, super markets and similar projects if the cost is more than \$5,000 in any 12-month period. It was felt that this might hamper store modernization and expansion to a great extent, resulting in fewer installations of air conditioning and refrigeration equipment.

In his letter Newman said:

"While Order M-4 does prohibit construction and alterations of and improvement to food stores and super markets in excess of \$5,000, applications may be filed for authorization to proceed with the construction of such work. In processing such applications consideration is given to maintenance of public health and safety or welfare and the effect on the community at large if authorization is denied.

"We appreciate your interest in this matter, but in view of the above do not believe that members of your association will be affected adversely by the provisions of Order M-4."

NCRSA MEMBERS GIVEN POCKET "PROFIT-TABLES"

Pocket-size profit tables for use in figuring profit margins accurately and rapidly have been furnished members of National Commercial Refrigerator Sales Association by NCRSA headquarters.

Failure to estimate selling costs accurately, NCRSA found, was a frequent cause of loss. To eliminate



INSTALL COMPLETE

Now you can figure complete jobs with Hirsh Pre-Bilt Shelving Equipment! The Hirsh Plan enables you to sell wall and gondola units that the merchant can assemble himself.

FOOD STORES



EASY TO INSTALL
FULLY ADJUSTABLE

HEAVY DUTY CONSTRUCTION
PROFITABLE FOR YOU



Write now for complete information—no obligation!

S. A. HIRSH MFG. COMPANY
8051 CENTRAL PARK AV., SKOKIE, ILL.
Chicago phone: Cornelia 7-4140 *CR

Name _____
Address _____
City _____ Zone _____ State _____



● Easy to Reach ● Easy to Load

Yes, this continuous Federal model 3307, Triple Deck, with brilliant lighting, has easy reach-in, from 3 big refrigerated shelves. Sales soar because customers find it easier to reach for those tempting items . . . in the huge mass display.

Products "out in the open", make valuable space pay off big. The Federal line for '51 includes every profit making feature.

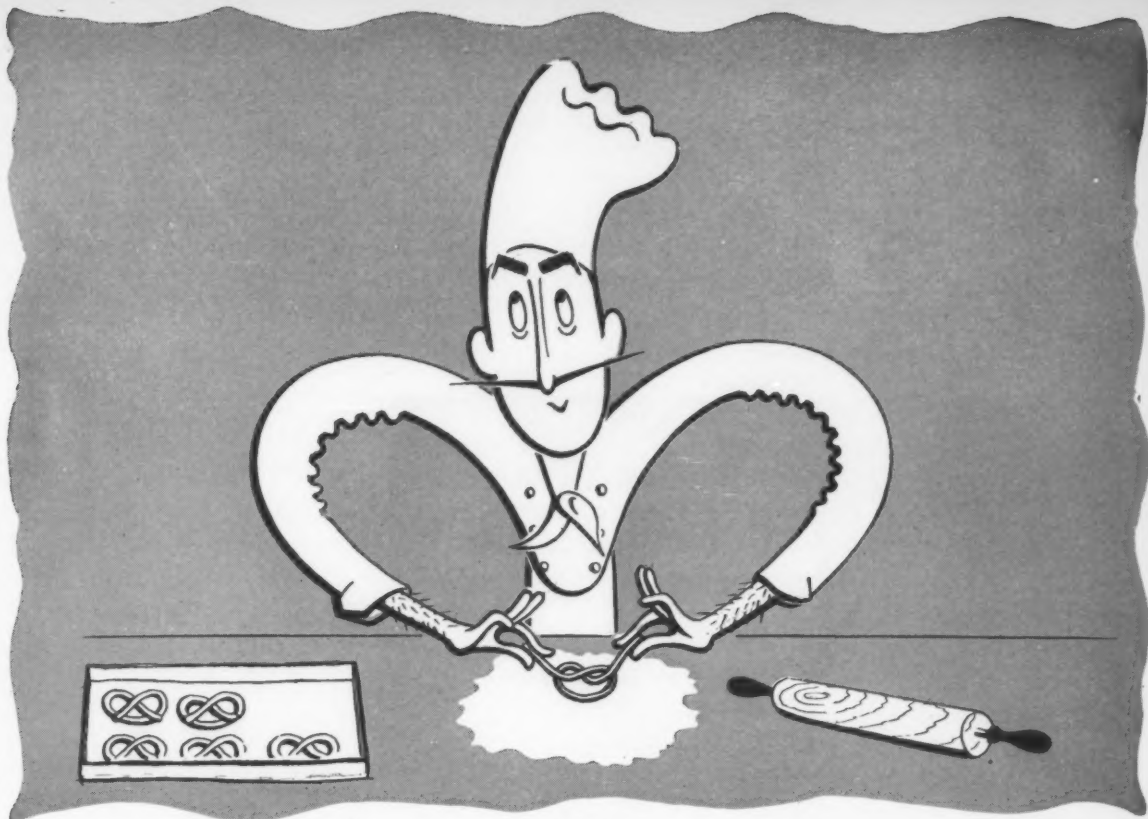
We welcome your inquiries.

Federal Refrigerator Mfg. Co.
Waukesha, Wisconsin

Federal
REFRIGERATORS

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80

Circle No. 62 on Reader Service Card for more information
APRIL, 1951 • COMMERCIAL REFRIGERATION



as easy as bending **DRYSEAL** REFRIGERATION TUBE

● There's nothing to bending dead-soft Dryseal. No special tools . . . in fact no tools at all, are needed. Simply bend it by hand. The soft temper of the copper used and its ductility are the reasons why Dryseal will not give you any trouble by splitting when it is flared for compression fittings.

Another important feature is the absence of moisture in Dryseal. A special, precise, mechanical double-crimp seal made at each end of the tube when it is manufactured keeps the inside com-

pletely bone-dry and free from dirt. What's more, this seal is made in such a way that it does not change the diameter of the tube. This makes it possible to pass the tube through any opening large enough for the tube itself. Economical tube sizes range from $\frac{1}{8}$ " to $\frac{3}{4}$ " O.D.

And, for your greater convenience we have just recently brought out Dryseal in a nifty-50 one-coil carton. This carton, which has been attractively designed for easy identification in stock, contains one 50-foot coil of Dryseal . . . is easier to handle, light weight, economical.

**NOW in the
NIFTY-50
one-coil
carton!**



REVERE
COPPER AND BRASS INCORPORATED
Founded by Paul Revere in 1801
230 Park Avenue, New York 17, New York

Mills: Baltimore, Md.; Chicago and Clinton, Ill.; Detroit, Mich.;
Los Angeles and Riverside, Calif.; New Bedford, Mass.; Rome, N. Y.
Sales Offices in Principal Cities, Distributors Everywhere.

Circle No. 63 on Reader Service Card for more information
and AIR CONDITIONING • APRIL, 1951

this error, three tables were developed showing:

1. The percentage of cost which must be added to secure a given percentage of gross margin.

2. The way to figure net profit based on delivered costs.

3. The way to figure the selling price based on percent of profit desired and the cost of doing business.

**BUY FROM YOUR
REFRIGERATION WHOLESALE**

NCRSA FIRMS REPORT INCREASED 1950 SALES

A survey of its membership recently completed by National Commercial Refrigerator Sales Association on business conditions has revealed that dollar sales for 1950 by NCRSA members were well ahead of 1949.

According to the final tabulation, dollar volume of sales in 1950 was 21.72% higher among NCRSA members than in 1949. Dollar volume in the fourth quarter was up 14.31% over 1949.

Inventory as of Dec. 31, 1950, was 47.34% higher than at the same date in 1949, and accounts receivable showed an increase of 27.36% at Dec. 31, 1950, as compared with the same 1949 period.

REPORT ON PAYMENT OF COMMISSION SALESMEN

Headquarters of National Commercial Refrigerator Sales Association has recently issued a report covering the manner in which NCRSA members compensate their commission salesmen in cases involving installment sales. The report provides information on when the salesman receives credit for his commission on the sale, and what adjustments are made if the merchandise is repossessed, etc.

JORDON PROMOTION HAS "PROFIT" THEME

A national promotion on frozen food cabinets, built around the idea of immediate profits for the independent food merchant through a modern frozen food department, was staged recently by Jordon Refrigerator Co. Cooperating in the campaign were leading frozen food distributors and packers in several areas, who worked with Jordon dealers to promote the opening of new frozen food accounts.

Probably the largest potential market for any item of commercial refrigeration or store fixtures, in the opinion of Jordon officials, has been on frozen food cabinets. However, because of the investment and limited profit, and the fact that the grocer could not take advantage of volume buying as he might be able to do in other staple grocery items, many independents who should have been selling frozen foods had no such department.

The Jordon campaign, besides helping the frozen food distributor to acquire these accounts, put cabinets into stores without forcing the dealer to relinquish his profits.

Sales message, as outlined in a promotional folder which carried both equipment dealer and food distributor imprints in the various cities, explained to the grocer how he could install a frozen food department, including both equipment and initial food supply, with one low down payment—amounting to less than the value of the food itself. This insured

Norgren

CO₂ REGULATORS

Proved best for

- trouble-free performance
- longer service
- satisfied customers

For SUPERIOR PERFORMANCE—hot or cold beverages—from cup vending machines, soda fountains, and beer dispensing equipment, standardize on NORGREN CO₂ REGULATORS. Their superiority has

been soundly proved by the thousands of Norgren CO₂ Regulators that have been giving satisfactory service year after year. Here are a few reasons why:

- Performance equals most two-stage regulators.
- Positive delivery of correct volume and pressure of CO₂ gas from supply tank.
- Hold working pressure *without creep* as tank pressure drops.
- Exclusive ball-pivoting lower spring rest for permanently friction-free operation.
- Wool felt filter permits only clean gas to enter regulator.
- Completely and easily dismantled without removal from tank.
- Reduce tank pressures of 1,000 to 3,000 p.s.i. to working pressures from 5 to 175 p.s.i.
- Listed by Underwriters' Laboratories, Inc.

Write for full descriptive literature. C. A. Norgren Co.,
241 Santa Fe Drive, Denver 9, Colorado

25th Year of
Progress

Norgren



Lubricators, Regulators, Filters,
Relief Valves, Check Valves,
Air Governors, Needle Valves,
Hose Assemblies and Couplings.

25 YEARS OF HELPING AIR POWER SERVE INDUSTRY BETTER

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the grocer of immediate profits, even with the sale of his first package of frozen foods.

In addition, he was protected by the five-year warranty on the equipment and by a "food insurance" policy against food spoilage caused by mechanical failure.

Conferences between refrigeration and frozen food leaders in cities where the campaign was conducted preceded all of the individual campaigns. This proved most effective in adding to the effectiveness of the promotion. Also, a factor leading to increased sales was the fact that by owning a frozen food cabinet the grocer was in a better bargaining position with ice cream companies, who formerly might have been reluctant to install cabinets in these stores because of the relatively small volume of sales.

Cabinet featured in the promotions was the Jordon model M-17, a cabinet large enough to handle the volume and variety of foods necessary to insure steady sales. From the dealer's standpoint, the promotion not only moved frozen food cabinets but also established prospects for other types of refrigerated equipment. To insure quick deliveries, warehouse stocks of cabinets were maintained at distributors' locations throughout the campaign.

FREEZERS LISTED IN '51 TRADE-IN GUIDE

A new section on home freezers has been added to the 1951 trade-in guide issued by the NARDA Guide Co., Madison, Wis. Name of the booklet also has been changed to "National Appliance Trade-in Guide." The pocket-size book of 200 pages lists 7000 models of 66 makes of household refrigerators, electric and gas ranges, vacuum cleaners, washers, and home freezers. It is priced at \$5 per copy.

STUDY AD METHODS

National Commercial Refrigerator Sales Association has announced that it has under way at present a survey to determine how NCRSA members spend their advertising dollars, and what mediums they find most effective. A report on the survey will be developed for members' use.

BUY FROM YOUR REFRIGERATION WHOLESALER



Stainless Steel Refrigeration

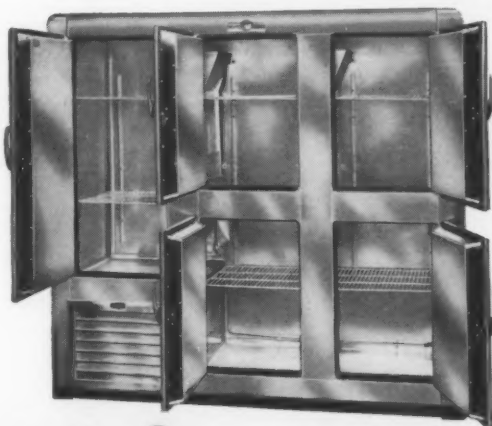
Built for Service

Vimco means quality! Advanced engineering plus skilled craftsmanship make Vimco the choice for top performance — top satisfaction.



Model DRS-70-3

Dough Retarder or Salad Refrigerator
Available from 42 to 98 cu. ft.
Remote and Self-Contained



Model RS-60-S

Available from 20 to 65 cu. ft.
Remote and Self-Contained



Pioneers of Stainless Steel Refrigerated Cases
For complete information write for catalog



VICTORY METAL MANUFACTURING CORP.
1300 SOUTH FRONT ST.
PHILADELPHIA 47, PA.

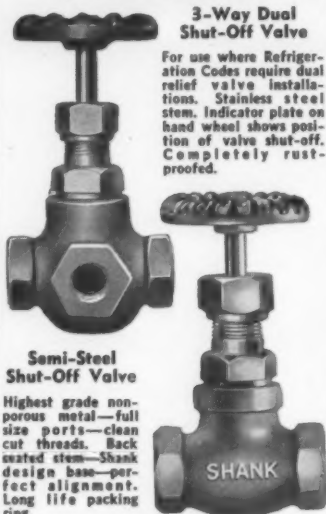
DISTRIBUTORS IN ALL PRINCIPAL CITIES

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SHANK

REFRIGERATION PRODUCTS

Recognized as the
Symbol of Quality!



**3-Way Dual
Shut-Off Valve**

For use where Refrigeration Codes require dual relief valve installations. Stainless steel stem. Indicator plate on hand wheel shows position of valve shut-off. Completely rust-proofed.

**Semi-Steel
Shut-Off Valve**

Highest grade non-porous metal—full size ports—clean cut threads. Back seated stem—Shank design base—perfect alignment. Long life packing ring.

IF YOUR JOBBER DOESN'T STOCK—
WRITE

CYRUS SHANK CO.

631 W. Jackson Blvd. Chicago 6, Ill.



SPRAY NOZZLES and ACCESSORIES

Delavan now offers a complete line of spray nozzles and accessories to meet every spraying requirement. The name Delavan is your assurance of top quality and outstanding performance.

WRITE FOR CATALOG NO. 30

DELAVAN
MANUFACTURING CO.

1009 SIXTH AVENUE
DES MOINES 13, IOWA

about PEOPLE

Three new district sales managers for Fogel Refrigerator Co., Philadel-

nationwide merchandising of electric water coolers and milk coolers.



R. B. Slater



S. E. Talbot



Frank Siegmund

phia, have been appointed by E. A. Terhune, vice president in charge of sales. **Robert R. Slater** of Seattle will direct Fogel sales in Washington and Oregon; **S. E. Talbot** of Los Angeles will supervise sales in California and Nevada; and **Frank Siegmund** of Phoenix will handle the Arizona, New Mexico and western Texas territory. Slater formerly was with Northwest Sales and Equipment Service Co., Seattle; Talbot, most recently a manufacturer's representative, formerly was sales manager of Ward Refrigerator & Mfg. Co.; and Siegmund is head of Frank M. Siegmund Co., sales representative for allied lines of equipment, with six field men covering the southern border area.

Robert E. Ditsler, merchandise manager of the Westinghouse refrigeration specialties department, Springfield, Mass., has been granted a leave of absence in order to join the National Production Authority in Washington, D. C. Ditsler will serve as an industrial specialist on household refrigeration and home and farm freezers. Ditsler has been with Westinghouse since 1930, and for the last three years has supervised

L. H. Hirsch has been appointed chief electrical engineer for Century Electric Co., St. Louis. He has been associated with Century since 1925, and is a graduate of the University of Illinois College of Engineering in electrical engineering. He is a member of the Engineers Club of St. Louis and of the general engineering committee of National Electrical Manufacturers Association.

Dell C. Aldrich has been appointed sales manager of the refrigeration division of International Products Corp., William Lapin, president, has announced. Aldrich will have complete charge of sales of IPC's stainless steel refrigerators and underbar dry bottle coolers, draft beer systems and ice cube crushers. Aldrich has long been associated with the commercial refrigeration field. Prior to his appointment as sales manager for International Products Corp. he was divisional sales manager for Ajax Bayston Corp.

Alfred S. Szandzik has been appointed assistant to the vice president and general manager of the Swift Mfg. Co., Hazel Park (Mich.) fabricator of sheaves, pulleys and other specialized supply items. Formerly process engineer, Szandzik has been with the Swift organization since 1948. K. M. Schaefer, vice president

and general manager, said the appointment is effective immediately and that Szandzik would continue to supervise his process engineering.

John L. Roth, a native of New York City, has been named commercial sales manager of York corp.'s central district. A veteran of more than 20 years in the air conditioning and refrigeration field, Roth's territory will include at

least portions of the states of Illinois, Michigan, Indiana, Wisconsin, Minnesota and North Dakota. He will headquarter in Chicago at the offices of Westerlin and Campbell Co., wholly owned York subsidiary. Roth came to York in July of last year with a rich background of experience in the industry including 10 years with Rex Cole Inc., a New York distributor, during which time he served as product manager and sales supervisor of all commercial refrigeration products. Since 1943 he has been with General Electric Co., serving as sales manager of the parts sales and product service division at the Bloomfield, N. J., plant from 1948 until joining York.

D. S. MacDonald has been appointed sales manager of a newly-created gear motor section of the Gear Motor and packaged drive division of General Electric's small and medium motor divisions.

Byron W. Goulding, manager of the carbon dioxide division of Liquid Carbonic Corp., Chicago, has been elected a vice president of the corporation. He will have headquarters in New York City.

Warde B. Stringham has been elected commercial vice president of General Electric Supply Corp. and will be the company's representative in Washington. The Chesapeake District of G-E Supply, of which Stringham was formerly manager, has been divided into two districts with headquarters at Washington and at Baltimore. **Arthur L. Aiken** has been

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AUTO-LITE

TEMPERATURE INDICATORS

For your specific needs!

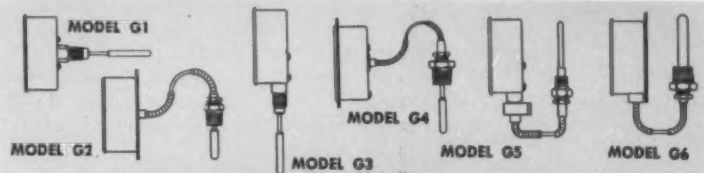
- ★ Precision-built indicators provide accurate temperature readings.
- ★ Low-cost protection . . . due to large, specialized production.
- ★ Wide selection of dial ranges to meet specific requirements.
- ★ 6 stock types available as shown.



MODEL "G"

Select the type that is best for your purpose. 2 1/2" dial; evenly calibrated scales. From \$18 up.

THE ELECTRIC AUTO-LITE COMPANY
INSTRUMENT AND GAUGE DIVISION Dept. P-6
TOLEDO 1, OHIO
NEW YORK • CHICAGO • SARNIA, ONTARIO



Top quality, one-piece copper shell drier, silver solder construction, with monel fine-mesh filter at inlet and outlet. Madden Duo-Test Driers are charged with finest refrigeration grade, dust-free silica gel. Non-refillable types in 3, 6, and 9 cu. in., and refillable types in 12 to 50 cu. in. capacities.

Always be sure—with the complete Madden line of fittings, driers, strainers, charging lines and accessories.



Send for Catalog E-4

MADDEN BRASS PRODUCTS CO.
1111 N. FRANKLIN ST. CHICAGO 10, ILL.

Circle No. 69 on Reader Service Card

LOOK to LARKIN For Efficiency



LARKIN HALF-TURRET HUMI-TEMP

Efficient operation makes a product easier to sell on one hand; builds solid customer satisfaction on the other. Precision engineering—only the best materials—skilled craftsmanship—and almost 25 years experience in commercial and industrial refrigeration—all add up to higher efficiency for every Larkin product. And this means lower operating costs — important to buyer and seller alike.

Manufacturers of the original Cross-Fin Coil — Humi-Temp Units — Evaporative and Air Cooled Condensers — Air Conditioning Units and Coils — Direct Expansion Water Coolers — Steel Vacuum Plate Coils — Heat Exchangers.

WATCHDOG OF THE NATION'S FOOD SUPPLY

LARKIN COILS
519 MEMORIAL DR., S.E. • ATLANTA, GA.



Circle No. 70 on Reader Service Card

appointed manager of the new Washington District and **J. Walter Turner** has been named to a similar position in the new Baltimore District. **Charles W. Webster** becomes assistant district manager at Baltimore.

W. P. L'Hommedieu has been appointed assistant Pacific Coast district manager for Westinghouse Electric Corp. with headquarters at San Francisco.

Fred B. Merritt has been appointed Midwest Sales Manager for Schnacke, Inc., Evansville, Ind. He will direct the activities of some 26 factory representatives located in the principal cities in the territory east of the Rocky Mountains and west of Pennsylvania, West Virginia and the Carolinas. Merritt has been associated with Schnacke for almost a year and was formerly divisional



sales manager for United States Air Conditioning Corp., and district sales manager for Lipman Division of Yates-American.

Appointment of **J. Truman Stone** as sales promotion manager of the Kelvinator Division, Nash-Kelvinator Corp., was announced today by J. C. Bonning, advertising manager. Stone has been advertising manager of the company's Leonard Division for the past four years. **W. L. Hulsiek** has been appointed Leonard advertising manager, succeeding Stone. Hulsiek has been Kelvinator-Leonard advertising and sales promotion manager of the corporation's Minneapolis zone for the past year. **Lowell Collins**, former sales promotion manager, has transferred to the company's ice cream cabinet division as district manager in New York.

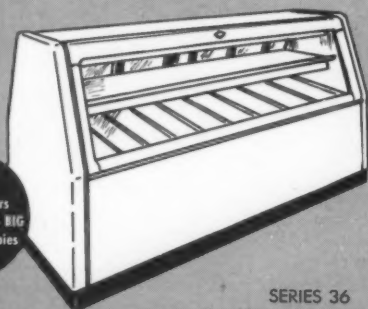
Herbert B. Nechemias was recently appointed manager of the industrial sales department at Wagner Electric Corp., succeeding **J. S. Smith**, who was appointed director of purchasing.

Charles C. Shutt, manager of Westinghouse Electric Corp.'s Small Motor Div. at Lima, Ohio, has announced the appointment of **Carl F. Herbold** to the position of director of manufacturing planning. Scope of the new position includes the development of plans having to do with manufacturing floor space, machines, tools, manpower, the availability of materials, and other duties as assigned. Formerly manager of industrial relations at the Westinghouse Small Motor plant, Herbold is succeeded in that position by **K. H. Smith**. Smith has served as assistant manager of industrial relations for the past five years.

Appointment of **Ralph G. Swigart** as plant manager of the Bloomfield automatic heating equipment plant of the General Electric Air Conditioning Department has been announced by E. D. Kemble, manager of manufacturing. Swigart succeeds Kemble, who was recently appointed manager of manufacturing of the G-E Air Conditioning Department.

BUY FROM YOUR REFRIGERATION WHOLESALER

*Serving America's
Finest Food Stores!*



There's an interesting story for dealers in "Bally MEANS BIG BUSINESS". Copies available

SERIES 36
Double Duty Case

...ONE OF 62 DIFFERENT
BALLY MODELS and SIZES

Bally

REFRIGERATED DISPLAY CASES
Bally Case and Cooler Co., Bally, Pa.

1ST CHOICE
FOR TOUCH-UP
SPRAYS RIGHT FROM THE CAN!

Use Spray-O-Namel for touching up:

Refrigerators
Frozen Food Display Cases
Air Conditioning Equipment

for painting:

Louvers
Ducts
Vents
Piping

in hard-to-get-at spots.



It's quick, easy and economical with Spray-O-Namel. Professional results assured. No brush, no mixing, no mess, no waste. Every drop of Spray-O-Namel is expelled from the pressurized can in a fine spray. Removable Presto-matic spray head eliminates clogging.

20 colors, largest selection of colors in spray painting field. Includes white, aluminum and clear plastic. Sold through refrigeration wholesalers. Write direct for brochures, color chart, etc. We manufacture a complete line of paint products.

Jobbers: Inquiries invited. We have a good deal for you.

Manufacturers: Ask about Spray-O-Namel in your particular color specification.

ILLINOIS BRONZE POWDER CO.
2023 So. Clark St. ILLBRONZE Chicago 16

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86

Circle No. 72 on Reader Service Card for more information
APRIL, 1951 • COMMERCIAL REFRIGERATION

THIS can mean more sales for you

THIS FULL-PAGE ADVERTISEMENT

is in:

CHAIN STORE AGE—APRIL

FOOD TOPICS—MARCH 5

QUICK FROZEN FOODS—MARCH

NATIONAL GROCERS BULLETIN—APRIL

SUPER MARKET MERCHANDISING—MARCH

and as Two-Page Spread in:

MEAT MERCHANDISING—MARCH

PROGRESSIVE GROCER—APRIL



Play Detective...and make sure

Better selling depends on better seeing. And Thermopane® insulating glass gives a clearer view into every case because its inside surfaces stay free of fog and film under normal conditions. The famous Bondermatic Seal® construction keeps the air between the panes dry, and permits narrower support posts and edge trim—for a better view of your stocks.

To make sure you have this better seeing, better selling feature in the next case you buy, look for the Thermopane imprint on the Bondermatic Seal between the panes. It's your sign of clear selling ahead! Ask your dealer if the case you're interested in is glazed with Thermopane insulating glass. Libbey-Owens-Ford Glass Company, 3241 Nicholas Building, Toledo 3, Ohio.



Thermopane

LOOK FOR THE NAME ON THE SEAL BETWEEN THE PANES

FOR BETTER VISION SPECIFY THERMOPANE MADE WITH POLISHED PLATE GLASS



Three Panes of Glass
Blankets of Dry Air
provide insulation
Bondermatic Seal® keeps
air dry and clean

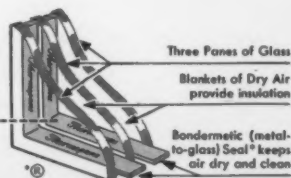
A healthy user preference, built up by consistent advertising in trade publications your customers read, can make your sales job easier—provided you're selling Thermopane-equipped refrigerated cases. And most leading case manufacturers offer this outstanding construction advantage today. Be sure you point out the use of Thermopane in the cases you handle—and tie in with this continuing sales-building promotion. Would you like reprints of this advertisement—and others in the series? Write us direct—limited quantities available free. Libbey-Owens-Ford Glass Co., 2941 Nicholas Building, Toledo 3, Ohio.



Thermopane

LOOK FOR THE NAME ON THE SEAL BETWEEN THE PANES

FOR BETTER VISION SPECIFY THERMOPANE MADE WITH POLISHED PLATE GLASS



Three Panes of Glass
Blankets of Dry Air
provide insulation

Bondermatic (metal-to-glass) Seal® keeps
air dry and clean

TEXACO CAPELLA OILS MEAN BETTER BUSINESS



Take the word of distributors, dealers and servicemen everywhere for it—you'll do a better business with *Texaco Capella Oils!*

These highly refined compressor oils have every quality needed to assure the clean, trouble-free compressor operation that assures satisfied customers all along the line . . . that brings in repeat orders and new business regularly.

Texaco Capella Oils are available in every needed viscosity . . . in 1-quart, 1-gallon and 5-gallon *sealed* containers . . . and are approved by leading refrigerating compressor manufacturers.

Let *Texaco Capella Oils* help build *your* business. The Texas Company, 135 East 42nd Street, New York 17, N. Y.



TEXACO Capella Oils

FOR ALL AIR CONDITIONING AND REFRIGERATING EQUIPMENT



TUNE IN . . . TEXACO STAR THEATER starring MILTON BERLE on television every Tuesday night. See newspaper for time and station.

Circle No. 74 on Reader Service Card for more information

APRIL, 1951 • COMMERCIAL REFRIGERATION

THE PRACTICAL REFRIGERATION APPLICATIONS MANUAL

By Harold Smith

Readers are invited to submit their problems to this department. Each letter of inquiry will be answered personally by the author. The most interesting ones will be published in these columns. All problems should be clearly and completely stated and addressed to: COMMERCIAL REFRIGERATION, Manual Dept., 1240 Ontario St., Cleveland 13, Ohio.

PROBLEM

I AM installing a walk-in for hardening of ice cream. It is 7 feet wide x 8 feet long x 7 feet high.

"It is insulated with 8 inches of rock cork, consisting of four 2-inch layers, each layer hot mopped and sealed inside with white fir.

"It is bordered on two sides by outside walls of cement block and on one side by a cooler room held at 35 F and serving both as a cooler for mix and as the anteroom to the hardening room described above.

"The owner has recommended a water cooled unit of 1½ hp, using two ½-inch suction lines. We would like a temperature of -30 F, using eight cold plates measuring 22 x 48 inches, four to the bank, with each bank having its own expansion valve.

"I would like to know if these recommendations are all right, what would be the best way of using effectively a heat exchanger on two suction lines, and what you would think of using Freon-22 on this temperature. Could the unit I have in mind above, which is a Freon-12 machine, be used for Freon 22?"

SOLUTION

IN OUR opinion the equipment specifications given are not balanced nor adequate for the load requirements. While you failed to give us any information on the product load we assume that a maximum of 50 gallons of ice cream per day would go into the cooler and we have based our calculations on this quantity.

We are also of the opinion that a -20 F temperature would be entirely adequate in this cooler. This would lighten the refrigeration load con-

siderably and also provide a greater capacity output from the plate coils.

The above conclusions are based on the following figures which we have developed on this installation.

If you operate the cooler at a temperature of -30 F we have estimated the total load at 4000 Btu per hour, 24 hours a day. Converting this load for a maximum for 18 hours operation out of 24 hours, the hourly load increases to 5350 Btu. The condensing unit must operate at a suction gas temperature of -40 F or lower. This affords a 10-degree temperature difference.

Av. suction gas temperature—40 F
Cooler temperature..... -30 F

Temperature difference 10 deg.

Estimated capacity of a 1½-hp water cooled condensing unit using F-12 at an average suction temperature of -40 F is approximately 4100 Btu per hour. (You can see this about equals the Btu hourly load for continuous operation over a 24-hour period.)

Plate Coil Capacity

The eight 22 x 48-inch plate coils operating at a 10-degree t.d. have an hourly capacity of approximately 2300 Btu per hour or about half of the needed capacity. If you operate the cooler at -20 F, the load requirements are somewhat reduced. Our estimate of this reduced load would be 3700 Btu per hour 24 hours per day or approximately 4900 Btu per hour on an 18-hour operation.

The condensing unit's capacity at -40 F suction temperature is approximately 4100 Btu per hour. The condensing unit would operate approximately 22 hours out of 24 hours when hardening 50 gallons of ice cream per day. If a smaller quantity of cream was hardened each day, the running time would be less.

With the cooler temperature a -20 F and the condensing unit suction temperature -40 F the temperature

differential is 20 degrees, which in turn doubles the capacity of the plate coils to approximately 4600 Btu per hour.

Summarizing our figures, the equipment you plan to use should handle the cooler at -20 F if not over 50 gallons of ice cream per day is to be hardened.

It would be advisable in our opinion to use a 2-hp water cooled condensing unit and approximately 16 plate coils to operate the cooler at -30 F while hardening 50 gallons of ice cream.

Locating Heat Exchangers

If heat exchangers are to be used we would recommend one on each suction line, unless you run the suction line as a single line through a heat exchanger and then branch off into two lines to the condensing unit. We would recommend use of two liquid lines and two suction lines, one set for each bank of 4 plate coils, with an individual heat exchanger on each suction line.

Regarding the use of F-22, we would suggest you consult the condensing unit manufacturer to first determine whether the unit in question can be satisfactorily changed over to the use of F-22, and also to learn if increased efficiency would result from the change-over. F-12 being a standard refrigerant we recommend its use—particularly at this time when difficulty is beginning to develop in securing materials and replacements.

MARKET IN DRIVE-INS FOR AIR CONDITIONING

Drive-in theaters have definite air conditioning requirements that should not be overlooked by air conditioning salesmen, says Don R. Groth, U. S. Air Conditioning Corp. representative in Oklahoma City. Groth has provided air conditioning for four outdoor theaters in the southwest, where this type of entertainment enjoys great popularity.

"Most drive-ins are concentrated in the warm weather states," Groth says, "it is vital to owners to provide cooling for personnel in projection booths, which are almost always constructed partly underground. Heat from projection equipment added to high summer temperatures makes such conditioning a necessity.

"Practically all drive-in theaters provide refreshment stands for the convenience of their customers, and these, too, need to be air conditioned. Without air conditioning during the warm day-time hours when the stands are closed, refrigerated ice cream and beverage storage systems do no operate satisfactorily."

Luscious OR Lifeless?



A raging storm that leaves whole cities without power . . . a refrigerator trailer that topples into a ditch . . . a refrigeration system that quits over the weekend—these are only a few of the mishaps that can transform delicious frozen foods into insipid refreezes.

Health authorities and consumers alike are awakening to the refreeze problem . . . demanding a safeguard against it.

That safeguard is here. It is the TAGliabue Miniature Recorder. Completely independent of any power supply, immune to normal jolts and jars, this sturdy instrument rides with the load on rail or road, steadily recording temperature. Compact, reliable, tamper-proof—it is being relied upon more and more by shippers and carriers alike to settle disputes, avoid lawsuits. Why not let it save trouble and expense for *you*?



The TAG Miniature Recorder charts temperatures from -30 to $+220^{\circ}\text{F}$., withstands severe vibration, runs for a week without attention. Less than six inches square, it can be equipped for remote indication, and for recording on-off operation of related equipment. Send for full details *now*!

TAGLIABUE INSTRUMENTS DIVISION

Weston Electrical Instrument Corporation
614 Frelinghuysen Avenue, Newark 5, New Jersey
Circle No. 75 on Reader Service Card for more information



"METAL EXCHANGE PLAN" SUGGESTED FOR SALVAGE OF CRITICAL MATERIALS

A plan that would result in the recovery of thousands of pounds of critical materials now lying idle in basements and storerooms of restaurants, cafes and taverns or in use in obsolete dispensing equipment in such establishments, has been suggested to NPA officials by Ray Kromer, president of Superflow Mfg. Co., Cleveland.

In a letter to A. Pierce, chief of the Conservation Division, Kromer points out that modern beer dispensing equipment uses only about one-third the critical materials (tin, copper, brass and stainless steel) as those built several years ago.

The average ice or sweet water bath system now in use, if replaced by modern equipment, would make available for reclamation and re-use an average of 30 lbs. of tin, 20 lbs. of copper, 22 lbs. of brass, and 10 lbs. of stainless, plus an undetermined amount of copper wire, copper, brass and iron from old condensing units, valves and fittings, Kromer estimates.

Based on an estimated replacement of 36,000 outmoded systems annually, this would mean that approximately 1,080,000 lbs. of pure tin, 432,000 lbs. of copper, 720,000 lbs. of brass and 360,000 lbs. of stainless steel would be reclaimed for re-use in the defense program.

Under the plan suggested by Kromer, a "metal exchange system" would be set up whereby individual manufacturers would be allocated material for new equipment in direct ratio to the credits accumulated through sale of scrap to a recognized dealer. The manufacturer, in turn, could operate on this same plan with his dealers and distributors.

REPRESENTS ACME IN MEMPHIS AREA

Acme Industries, Inc., Jackson, Mich., has announced the appointment of T. J. O'Brien Engineering Co., Memphis, Tenn., as a representative.

The company is headed by T. J. O'Brien, and has been operating since 1930. Others in the firm are Robert E. Larkin, George B. Ramsey and John T. Pullen.



"Keep cool with ESTON!"



**METHYL CHLORIDE
SULFUR DIOXIDE**

Distributors of

FREON 11-12-21-22-113-114

In Standard Containers



NO CYLINDERS • NO DEPOSITS
Charge-A-Can
DISPOSABLE CONTAINER WITH
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SALES OFFICES IN ALL PRINCIPAL TRADING AREAS

Circle No. 76 on Reader Service Card for more information
and **AIR CONDITIONING • APRIL, 1951**

HELP YOUR CUSTOMER . . .

Continued from page 35

story, but actually there is more. Once the modern new case was installed in this store it made the rest of the equipment look so shabby and outmoded that Dieter ended up with a contract for completely remodeling the entire establishment, including installation of a meat case, frozen food case, and shelving.

Moral of this story is, Dieter points out, that no merchant will hesitate long about buying *profits*—if they can be proved in black and white before his eyes.

The trouble with too many refrigeration men, Dieter observes, is that they are satisfied to be order takers rather than salesmen. In attempting to close a sale they talk only in terms of the equipment they are trying to sell, not in terms of what it will do for the prospect. They don't attempt to appeal to the merchant's self-interest, because that takes a little effort, imagination, and a basic understanding of the prospect's business.

Dieter's own personal sales formula consists of three basic steps:

1. Convince the prospect of his need for the equipment.
2. Show him how your particular equipment is going to satisfy this need.
3. Demonstrate convincingly (and this means getting down to the wrapping paper routine) that the extra profits which will be made possible by this equipment will repay the merchant's investment within a reasonable time.

THREE 20-TON UNITS COOL MIAMI BEACH APARTMENT

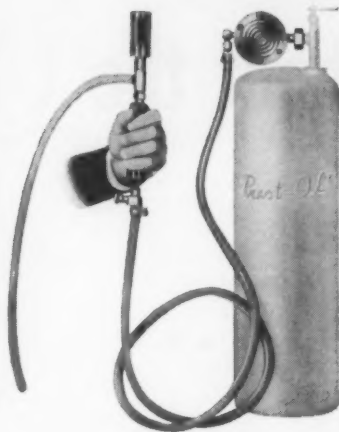
Contract for air conditioning the new 54-family Broadwater Beach apartments under construction in Miami Beach, Fla., has been awarded to Airko Air Conditioning Co., Dade County dealer for United States Air Conditioning Corp.

The new apartments will comprise three two-story buildings, each containing 18 suites.

Air conditioning will be provided by three factory-built "Kooler-Aire" 20-ton units adapted to each building as a central plant system. Remote manual controls allowing for individual control in individual rooms will be provided.

Prest-O-Lite HALIDE Leak Detector

Trade-Mark



Quick—Always ready for use. Lights instantly. Locates exact source of leak with a few sweeps of test hose.

Sure—Reacts instantly to smallest concentrations of all non-combustible halide refrigerant gases commonly used in domestic and industrial systems.

Simple—Easy to use anywhere. No delicate parts to get out of order.

Price (less tank) . . . \$14.50

"Prest-O-Lite" is a registered trademark of Union Carbide and Carbon Corporation.

See your jobber or write us for further information. Linde Air Products Company, a Division of Union Carbide and Carbon Corporation, 30 East 42nd Street, New York 17, N. Y.

Order from your local Jobber

Specify TECHNIFLEX . . . Vibration Eliminators that challenge comparison!

There's a Techniflex vibration eliminator for every job — each precision designed and engineered to give you the best for elimination of vibration and dampening of noise.

- **GREATER BRAID STRENGTH** — Due to mechanical method of attaching braid, requiring no heat, annealing is eliminated and original braid strength retained.
- **LONGER LIFE** — Inner flexible bronze hose is subjected to less heat during assembly at our plant, resulting in much longer life.
- **LESS DANGER OF DAMAGE** — Use of longer nipples at ends tends to eliminate danger of damage to unit when assembled in the field.
- **BETTER QUALITY for BETTER PERFORMANCE** — Special bronze tubing plus precise engineering in the development of convolutions permits greater flexibility for absorbing vibration and noise.



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CORP.

"Serving the Refrigeration Industry"

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did you hear the one about the traveling serviceman?...



**He visited
around the world and was
tickled pink to find
Ranco controls
just about everywhere!**

Of course, when you consider that there are more than 35,000,000 Ranco controls now in use, it's no wonder our perambulating globe-trotter found a lot of them. See your Ranco wholesaler now. He has the most complete replacement line ever offered. And remember—from Kokomo to Tokyo—in nearly every land . . . *top-quality Ranco controls are always in demand!*

RANCO REPLACEMENT REFERENCE No. 1244

The most complete reference manual of its kind. Ranco replacements for more than 4,000 controls are listed. Includes an alphabetical listing of all refrigeration manufacturers, trade names, and the Ranco Replacement Control Code Number. **AVAILABLE ONLY THROUGH YOUR RANCO WHOLESALER.**

CHECK *Ranco* FIRST AT YOUR WHOLESALERS

- specialists in refrigeration
- dependability
- greater customer satisfaction
- less stock to carry
- more profits to you



Ranco Inc.
COLUMBUS 1, OHIO



WORLD'S LARGEST MANUFACTURERS OF REFRIGERATION CONTROLS

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APRIL, 1951 • COMMERCIAL REFRIGERATION

HERE'S HOW!

Edited by
Warren W. Farr

Is Dry Ice Right for Correcting Thermometers?

Here's a comment on the "I Do It This Way" suggestion by Arthur Mitchell of Lorain, Ohio, published in our February department. It comes from Al Kayser of Fort Wayne, Ind., and reads as follows:

"I was very much interested in Arthur Mitchell's idea in the February *Here's How* to correct mercury separation in thermometers by holding the bulb on a piece of dry ice. Years ago a representative of the Taylor Instrument Company told me that this should not be done, as mercury freezes at 35 degrees below zero and when it thaws out it expands and takes up more space in the tube of the thermometer, and therefore the thermometer will be faulty.

"I can't prove it, and suggest that you look into it."

Many thanks, Mr. Kayser. We will look into it, and report our findings in a later column.

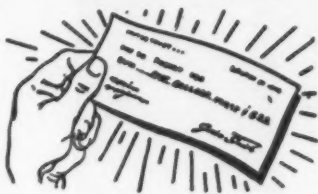
I do it this way...

TO RELIEVE an oil-logged coil in a 2-ton system without an oil separator, I took a 145-pound Freon-12 drum, took the valve out, and screwed in a 3/4-inch brass bushing through which I had soldered one short and one long piece of 3/4-inch tubing.

This was placed between the suction valve and the compressor by means of two service valves, one valve on the compressor and the other bolted to the regular suction valve. This method required no shutting down of the system, although it did cut down the capillary some. After about a week I removed the rig, and the system works almost like new.

R. B. Park, Yazoo City, Miss.

WANT TO EARN \$5?



You don't have to be a writer or a literary genius! Just jot down some of the shortcuts you've developed in your maintenance or installation work and send them to **HERE'S HOW EDITOR, COMMERCIAL REFRIGERATION AND AIR CONDITIONING**. Your \$5 will be paid promptly when your maintenance tip is published in the magazine. Let's hear from you!

Water Cooler Controls Can Cause Trouble

If you are called upon to service a troublesome water cooler, it may be that the control is at fault. If you think this is the case, it is best to make a systematic check of the control. Here are some things to look for—and what to do about them:

1. Dirty or pitted contacts. Clean the contacts or, if that is not possible, replace the control.
2. Main contacts remain open. This indicates a discharged bellows. If the bellows is leaky, replace the control.
3. Erratic operation. Check to see if the bulb is loose in the well.

What Do You Know About "Effective Temperature"?

In still air there is a definite mathematical relationship between wet and dry bulb temperatures giving conditions of equal comfort.

Starting with saturated air at any

given temperature where the wet and dry bulb temperatures are identical, it has been found that the same sensation of warmth could be obtained by increasing the dry bulb and proportionately decreasing the wet bulb temperatures.

Such a series of atmospheric conditions giving the same feeling of warmth, when plotted on a psychrometric chart, gives a straight line called an *equal comfort line*. This series of equal comfort lines gives an index of a person's sense of warmth which is called the *effective temperature scale*.

The effective temperature of any point on the chart is fixed by the dry bulb temperature of the intersection of the effective temperature line through the point with the saturation curve.

Air velocity tends to move the effective temperature lines to the right and decrease their angle with the dry bulb temperature lines so that a higher dry and wet bulb temperature is required for the same feeling of warmth with moving air.

The scale of effective temperature

I do it this way...

TO CLEAN air-cooled condensers in the field, I use a portable air tank. These tanks are available at most automotive supply companies. I use a blowing attachment on the hose that is on the tank.

These tanks can be refilled at any service station. They operate on a pressure of 150 pounds, which, if you use it conservatively, will be sufficient to clean about three average-size condensers.

I have found the use of this device very helpful in my maintenance work on equipment using air-cooled condensers.

W. S. Sheffield, Paris, Tex.

TAC does what no other tool can do!




AT LAST! AN OPEN-END RATCHET WRENCH — the world's first true universal wrench. A patented design for connections on tubing, rods, piping, conduit, studs, etc. Sixty-four socket sizes from $\frac{1}{8}$ " to 4". Smallest effective ratcheting arc yet — 5° to 7½°. TAC will also do every job any ordinary ratchet wrench will do; one TAC set replaces literally dozens of single-purpose hand tools.

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"PACKAGE OF PROFITS"
MERCHANDISING BOOK



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Gentlemen: I am interested in making money
selling ☐ Air Conditioning. ☐ Refrigeration ...
the Easy Lipman way. Send details.

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**A COMPLETE LINE
FOR '51**

- HOME AIR CONDITIONERS
- ROOM AIR CONDITIONERS
- COMMERCIAL AIR CONDITIONERS

Circle No. 82 on Reader Service Card for more information

is the only index which truly indicates relative human comfort for all conditions of temperature, humidity, and air motion.

The dry bulb temperature alone has little value, contrary to the usual impression. If the humidity is low we must raise the temperature, or if the humidity is high we must lower the temperature, so that for any given effective temperature, many combinations of the dry bulb temperature and humidity are possible.



TO REFILL refillable driers with silica gel and have minimum moisture and loss of desiccant, I developed the device shown in the sketch. Here's how it was done:

I soldered a funnel onto a cap from a used silica gel container. A hole had been cut into the cap just a little smaller than the base of the funnel.

I also cut a "window" into the funnel, covering it with cellophane tape from both sides. This allowed me to see when the desiccant stops flowing into the drier cartridge. The small end of the funnel was made to just fit over a $\frac{3}{8}$ -inch flare fitting, thus handling most driers.

Henry B. Boyce,
San Leandro, Calif.

Do You Know That . . .

. . . you should not leave rolls of tubing open for even a short time? Pinch or hammer the ends together immediately after cutting off a piece to suit your needs.

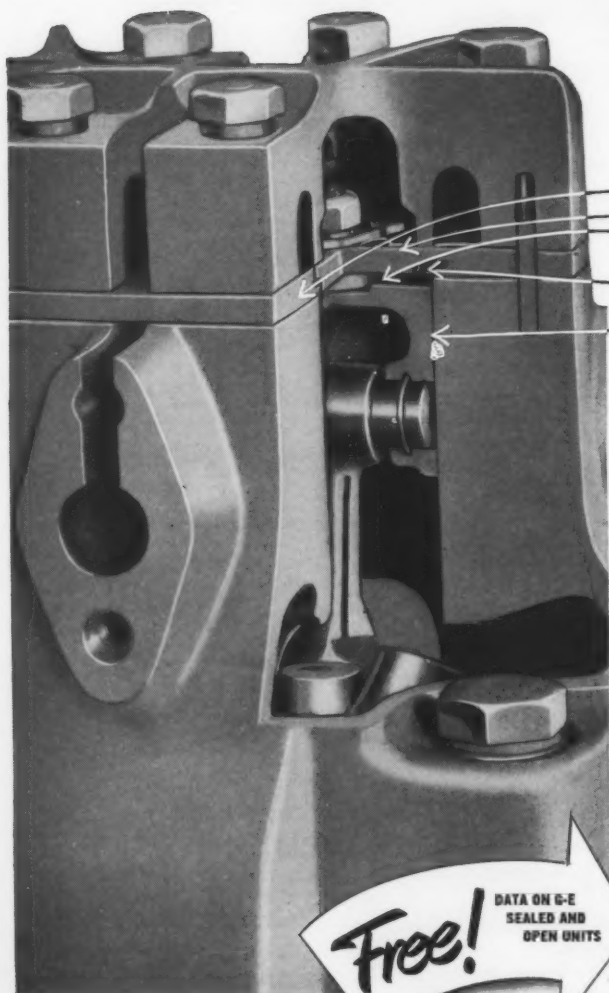
. . . on any air cooled condensing unit you should remember that air circulation is of primary importance? Always be on the lookout for proper fan rotation. A cabinet should be free standing, if possible, so that no walls or other fixtures immediately impede circulation. Watch for paper and trash that has a habit of accumulating behind cabinets and fouling the air circulation system.



CONDENSING UNITS AND RENEWAL PARTS

Here's how G-E Compressors give

HIGH CAPACITY WITH LOW POWER INPUT



- Thin Valve Plate
- Quick Opening Valves
- Low Clearance Volume at Top of Stroke
- Large Gas Passages
- Minimum Clearance Between Piston and Cylinder Walls

Every stroke of the piston getting full use of the piston's compression—this is G. E.'s secret to high compressor capacity with low power input. Such a reduction in waste piston effort gives you the major benefits of top performance and low operating cost.

G. E.'s thin valve plate and low clearance volume mean that practically all the compressed gas is discharged on every stroke leaving practically none behind to re-expand and be compressed again. Clearance between piston and cylinder walls is held to exacting limits. Such close tolerance, plus the constant supply of oil to cylinder walls, reduces gas blow-by and thereby results in higher efficiency. Gas friction is minimized by the large passages and quick opening valves, thus allowing refrigerant to move easily and quickly through the system.

Free!

DATA ON G-E
SEALED AND
OPEN UNITS

Cufaway view of G. E.'s compact Type CW compressor with piston near top of stroke.

You can put your confidence in—

GENERAL  ELECTRIC

General Electric Company
Air Conditioning Dept., Sec. CR-6
Bloomfield, New Jersey

Please send me literature on ☐ G-E Hermetics ☐ G-E Open Units ☐ G-E Renewal Parts
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CITY.....ZONE.....STATE.....

Circle No. 83 on Reader Service Card for more information

and AIR CONDITIONING • APRIL, 1951

"Prove the Need and the Sale Takes Care of Itself!"

FOR ACCURATE INFORMATION ON
RELATIVE HUMIDITY and
TEMPERATURE...RELY ON

Bendix- Friez

When your customers see the facts and figures, your selling job virtually disappears. With precision-made, dependable Bendix-Friez instruments you can demonstrate with on-the-spot readings or recordings exactly how much and where your customers need temperature and humidity control for maximum comfort in the home, maximum efficiency in industrial operations. Bendix-Friez instruments are built to U. S. Weather Bureau standards by the world's oldest and largest manufacturer of fine meteorological equipment. Write for complete information.

BENDIX-FRIEZ MODEL 160

Portable Humidity and
Temperature Recorder

3" x 5" charts, 10 or 30
hour records. Modern design... handy for small space and difficult locations... built to meet unusual conditions.



BENDIX-FRIEZ

Hygro-dial

Precision Humidity and Temperature Indicator

Hand-operated and calibrated to professional standards of accuracy by the maker of the world's finest weather instruments. Handsome, modern case—4" high, 3 1/4" wide, 1 3/4" deep—desk or wall mounting.

FRIEZ INSTRUMENT DIVISION of

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Export Sales: Bendix International Division
72 Fifth Avenue, New York 11, N. Y.

Circle No. 84 on Reader Service Card

98

APRIL-NATIONAL REFRIGERATION ★ SAFETY MONTH ★

Safety in Refrigeration Pays All-Ways Every Month in the Year

RALLYING under the banner and slogan reproduced above, industry groups this month are intensifying their cooperative efforts to promote the cause of safety among all refrigeration workers.

Through the medium of this intensified promotional effort, this safety program which has been carried on for many years by the Refrigeration Service Engineers Society now is receiving wider attention than ever before. Twelve allied refrigeration associations are being invited by the National Safety Council to support National Refrigeration Safety Month.

Commenting on this concentrated safety program, R. H. Israel, president of Refrigeration Equipment Manufacturers Association, says:

"Our Association is wholeheartedly in support of a safety movement in the refrigeration industry, and we are glad to cooperate with the National Safety Council, the Refrigeration Service Engineers Society, and other organizations in focusing attention upon the safety factor in the manufacture, operation, and repair or service of all refrigeration and air conditioning equipment."

One of the features of the month will be a safety display at the 1951 Eastern Refrigeration and Air Conditioning Exhibit and Conference to be held April 6, 7, and 8 at Hotel Statler in Buffalo, N. Y.

The REMA Safety Committee is made up of W. R. Rinelli, Ansul Chemical Co., chairman; Paul O. Domke, Mueller Brass Co.; Cecil Boling, Heat-X-Changer Co., Inc.; D. M. Bodine, Copeland Refrigeration Corp.; and R. H. Luscombe, Penn Electric Switch Co.

Calling attention to the fact that due to the general laxity of accident prevention activity within the industry the refrigeration accident frequency rate is still way above the average for other industries, the National Safety Council points to the situation in the state of Ohio as an example of what a consistent program of safety education can accomplish.

As a result of the intensive refrigeration safety activity which has been

carried on in the state for the past several years under the crusading leadership of George J. Schuld, Cleveland service contractor and in-

PLAY IT SAFE!

By George J. Schuld
International Safety Director, RSES

DISCARDED CONDENSING UNITS

THIS is one fire and explosion hazard that is frequently overlooked.

There are in existence many old refrigeration condensing units that have served their usefulness and have been disconnected and replaced by new and more modern equipment.

In disconnection of these units, many of them were pumped down until the entire charge of refrigerant in the system was contained in the receiver of the old unit, and the valves were closed and the unit removed and left standing in this condition. Many of these older condensing units were not equipped with fusible plugs or other relief devices, and the amount of refrigerant contained in these units may be sufficient to cause a serious explosion if exposed to excessive heat, as in the case of fire.

Another hazard that exists with these units is the possibility of a leak developing—even without excessive heat being present—and the escaping refrigerant entering heating or ventilating systems and being carried to occupied areas, causing either serious discomfort or panic among those so affected.

It is of the utmost importance that these units be either removed from the premises and disposed of by responsible persons familiar with refrigeration equipment or that the refrigerant in the unit be discharged by a competent refrigeration man and the unit be tagged to show that this has been done.

It is suggested that fire and building inspectors give this matter serious consideration and take steps to eliminate this hazard.

international safety director of RSES, the refrigeration accident frequency rate has been reduced to less than half of that which is common to the industry as a whole.

It is the firm belief of the sponsoring organizations that this same accident prevention reduction could be achieved on a national scale if sufficient attention were paid to the problem of refrigeration safety.

*"They're real jewels
-every one
of them!"*



"Sure, they're clean and shiney just like a copper tube fresh from the mill. But what I'm talkin' about goes 'way beyond just looks. With NIBCO fittings every solder cup fits the tube right. When you're rushed (and aren't we all these days) the way they heat up fast and speed the job makes you mighty glad you insisted on NIBCO wrought fittings. They don't cost you a penny more than ordinary fittings and you can always get them in just the right style and size for any job that comes down the pike." Ask for NIBCO fittings at your jobbers.

NIBCO



NORTHERN INDIANA BRASS CO., 414 PLUM ST., ELKHART, INDIANA

Circle No. 85 on Reader Service Card for more information

What the serviceman should know about VIRGINIA REFRIGERATION products

To Charge a System,
Use Refrigerants
That Are
Consistently Pure,
Consistently Sure...



"EXTRA DRY ESOTOO" (B. P. +14°F.)

"Extra Dry" is the refrigeration grade SO₂, that service and maintenance engineers have endorsed for more than 20 years. Comes in all popular cylinder sizes.

"V-METH-L" (B. P. -10.7°F.)

Virginia Methyl Chloride is made specifically for refrigeration use. Low moisture content, low acidity and narrow boiling range recommend "V-Meth-L" for the most exacting requirements.

"FREON" REFRIGERANTS

"FREON-11"
"Boiling Point"
74.7°F.

"FREON-12"
"Boiling Point"
-21.6°F.

"FREON-22"
"Boiling Point"
-41.4°F.

"FREON-113"
"Boiling Point"
117.6°F.

"FREON-114"
"Boiling Point"
38.0°F.

Virginia Smelting Company is distributor
for Kinetic's "Freon" Refrigerants.

VIRGINIA'S NEWEST PRODUCT... CAN-O-GAS



Handy, throw-away, no-deposit can. The perfect way to charge hermetic systems, water coolers, beverage coolers, vendors. Available filled with "Freon-12" (15 oz.) or "Freon-114" (16 oz.). Each can is precision-filled to make certain the refrigerant is clean and dry. Can-O-Gas features a simple, practical clip-on opener which fits small valves designed for this use. Slip it on the can; turn to puncture seal. It's leakproof, foolproof.

ASK YOUR WHOLESALER
OR WRITE
VIRGINIA SMELTING
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CHICAGO • DETROIT • ATLANTA

VIRGINIA
Refrigerants

SELF-SERVICE . . .

Continued from page 53

28 F which is also adequate for poultry and fish.

Forming an unbroken line with the meat department is a 56-foot section of open cases for cold cuts, delicatessen and dairy products. Included in this section is one 11-foot double-deck, self-contained case with a 1½ hp condensing unit and automatic defroster, which is maintained at a temperature of 36-38 F. The balance of these cases, held to the same temperature, are refrigerated by two 2-hp condensing units.

The display equipment mentioned so far takes up two walls and part of a third. The installation in this section of the large store is completed by 21 feet of open-top frozen food cases (mostly for meats, sea food, etc.). Produce is segregated in a room that adjoins the main store area at one end, and here two more open-top low-temperature display cases are used for frozen fruits and vegetables exclusively.

In all, 12 condensing units ranging in capacity from 1½ to 5 hp provide

refrigeration for the display cases and walk-in coolers. These condensing units were set up in three separate groups, so that each unit could be located as close as possible to the fixture which it operates, thus avoiding excessively long runs of tubing regardless of equipment location.

The bulk produce cooler, also served by these same condensing units, is located in a separate area and does not show in the store layout.

What results did all this careful planning and considered conversion to self-service operation achieve?

After opening of the revamped market, the store's management reported an increase in 100% in the sale of certain cuts of meat, and a 50% increase in the poultry volume. These additional sales were attributed directly to the self-service merchandising program, and the added profit they continued to afford is going a long way toward paying for the cost of the new equipment.

The market also has found that the switch to self-service has simplified its employee problem. Butchers, for instance, no longer are needed "after hours" on the days the store is open late, for all meat is fully prepared and

packaged during the regular daytime shift. One girl is sufficient to replenish the stock in the display trays from the storage bins which enter into the packaging department. This economy is another way in which the self-serve equipment helps to pay for itself.

What's the moral of this story? Simply this. If you have a prospect who's thinking of installing a piece or two of self-service equipment, point out to him the advantages he can achieve and the economies he can effect by going "all the way". It may help you sell a whole market instead of just a single case!

YEAR-ROUND UNITS FOR NEW PROJECT

The 14-floor, three and a half million dollar Orleanian apartment building in New Orleans, recently opened for occupancy, is equipped with 299 Marlo air conditioning units, designed for cooling, heating, ventilating and filtering of air. Individual switches control the cooling or heating in each apartment, as the individual tenant desires. Air conditioning contractor on the project was Sciambra & Masino, Inc.

Serving America's Finest Food Stores!



There's an interesting story for dealers in "Bally MEANS BIG BUSINESS". Copies available

...ONE OF 62 DIFFERENT
BALLY MODELS and SIZES

Bally

REFRIGERATED DISPLAY CASES
Bally Case and Cooler Co., Bally, Pa.

Circle No. 87 on Reader Service Card for more information
and AIR CONDITIONING • APRIL, 1951

Instead of this



BETTER BUY
BERNZ



Hottest,
Handiest Torch
FOR ANY JOB!

A mighty mite for man-size jobs. Weighs only 2½ lbs., burns in any position, any time, even at minus 40° F. Complete with pencil flame and utility burners. Slick-as-a-whistle orifice cleans in 30 seconds. Inexpensive cartridge refill at any LP dealer's. BETTER BUY BERNZ.

- ◆ Liquefied Petroleum "Always Reliable"
- ◆ Burns up to 11 hours Since 1876

Patent
Pending



OTTO
BERNZ

Otto Bernz Co.
280 Lyell Ave. Rochester 8, N. Y.
Please send me more information at
once about the handy LP torch.
Name.....
Address.....
My supplier is.....

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SALES MANAGER WANTED

With Commercial Refrigerator experience preferred. Good salary, plus automobile, traveling expenses and Bonus. Write application yourself, pen and ink, fully explaining experience, nationality, family, past jobs, references, age.

ED FRIEDRICH SALES CORPORATION

P.O. Box 1540 San Antonio, Texas

the LIQUID EYE

5 Years Ahead!

Experience - Leadership - "Know-How"



A Proven Product

FOUR SIZES

1/4" - 3/8" - 1/2" - 5/8"

Flare to Flare, Female and Male,
or Solder Connections

SEAL CAP on 1/2" and 5/8" LIQUID EYE indicators gives extra protection against sudden blows, prevents breakage and guards against loss of refrigerant. The SEAL CAP is threaded externally and it is only necessary to back cap off by hand for instant inspection.

Again Allin leads the way with practical refrigeration products.

Ask to see LIQUID EYE at your JOBBER.

ALLIN MANUFACTURING COMPANY

1153 West Grand Ave., Chicago 22, Ill.

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102

OPPORTUNITIES

(Classified Advertising)

Rates: for "Positions Wanted," \$4.00 minimum, limit 25 words. For all other classifications, \$4.50 minimum for 25 words or under, each additional word 15c; boldface type or all capitals, \$7.50 minimum for 25 words or under, each additional word 20c. Box addresses count as five words, other addresses by actual word count. All advertisements in this section are payable in advance.

BUSINESS OPPORTUNITIES

For Sale—Established Appliance, Commercial Refrigeration and Air Conditioning Sales and Service business in Tennessee county seat town in TVA area. Excellent opportunity for partners who can handle service and sales. Present owner retiring. Box 4151, Commercial Refrigeration and Air Conditioning.

ICE-STORAGE PLANT. Ohio city; sales \$32,000 year; brick building 86 x 96; modern equipped 20 ton capacity; three trucks; price reasonable. APPLE COMPANY, BROKERS, CLEVELAND, OHIO.

TRAINING AVAILABLE

Veterans attention: Enroll in the school of your choice before the July 25 deadline. For men engaged in or who would like to become engaged in any phase of Air Conditioning, Refrigeration, Heating, Ventilating, Heat Pump Engineering or Sheet Metal work, classes before the July 25 date start April 24, June 5 and July 17. Write for catalog. Detroit Air Conditioning Institute, 4258 Woodward Avenue, Detroit 1, Michigan.

FOR SALE

FOR SALE: 2000 Ea. SUPERIOR CAPPED COMPRESSOR VALVES, with Gauge

Port, 1 1/2" Bolt Hole Centers, 3/4" Connections. 3200 Ea. MUELLER BRASS FRIGIDAIRE TYPE COMPRESSOR VALVES, 1 1/2" Bolt Hole Centers, 3/4" S.A.E. Connection. Twin Gauge Ports. F.O.B. Baltimore. . . . Subject to Prior Sale. CONTINENTAL MACHINERY & EQUIPMENT CO., OSTEND & RIDGELY STREETS, BALTIMORE 30, MARYLAND.

POSITIONS AVAILABLE

DISTRICT SALES SUPERVISOR WANTED—Nationally known manufacturer of commercial refrigerators has unusually attractive proposition for aggressive representative for prosperous Michigan-Indiana-Ohio territory. Earnings commensurate with experience and ability to develop territory for which the groundwork is already laid. Our own personnel know about this advertisement. Please furnish details experience, present connection, etc., in first letter. Address Box 4251, Commercial Refrigeration and Air Conditioning.

ANNOUNCE PARTNERSHIP ON ICE RINK FLOORS

E. R. Carpenter, Cleveland, Ohio, and G. A. Post, Indianapolis, Ind., announce the formation of their partnership, Carpenter Ice Rink Floors, to carry on the M. R. Carpenter monolithic concrete floating floor and piping system structures and to build floors for every application in the field.

Recent Carpenter installations engineered by Post are the Wollman Memorial Rink, Central Park, N. Y., Cambria County War Memorial Building, Johnstown, Pennsylvania, Sioux City Auditorium, Sioux City.

NO MORE FREEZE-UPS

of expansion valves or capillary tubes!

ICE-X works like magic
SERVICE MEN SAY: "ICE-X IS GREAT!"



When ice forms in expansion valves or capillary tubes, ICE-X is a sure remedy . . . ICE-X is non-corrosive—harmless to parts. An ice-eliminator that can't be beat for Freon, Carrene, or Methyl Chloride systems . . . Order from your jobber. If no jobber, order direct.



Service doesn't falter
when it comes from Harry Alter

Jobbers: Ask for special offer!

The HARRY ALTER CO.

1728 S. Michigan Ave. Chicago 16, Illinois

Exclusive
ICE-X
Distributor

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APRIL, 1951 • COMMERCIAL REFRIGERATION

...the 'PENN'tagon
calls Mr. JOB-PAK



Quality TUBING GETS DRAFTED *First*

The government needs high quality tubing—dependable at all times for perfect performance and lasting serviceability. Naturally, Penn was put on call early, for Penn tubing measures up in any field. Rigid quality control maintains the properties for which Penn seamless tubing is famous—it's always dry, clean and bright, uniform, and so easy bending. For easier installations and fewer rejections, insist on tubing with the Penn trademark, packed in the protective Job-Pak carton. Even though allotments have been reduced, you can always count on a "package of quality" with every package of Penn tubing.



Modern Papco tube tools save tubing by making a perfect flare . . . Order now and conserve tubing. Send for complete Papco literature.



QUALITY TUBING HAS A "PENN NAME"
PENN BRASS & COPPER COMPANY
ERIE • PENNSYLVANIA • TELEPHONE 3-5111

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and AIR CONDITIONING • APRIL, 1951

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SEVEN MILLION DOLLAR CROP

protected by

PALCO
INSULATION
WOOL



(Above) Shippers Development Company plant at Salinas, California, where 35 cars can be iced and loaded at one time. Associated Refrigeration Engineers of Los Angeles engineered and constructed the entire plant.

(Right) Part of storage facilities, fed by harvest of 72 blocks in every 25-minute cycle.



Covering 43 acres, the ultra modern Shippers Development Company plant at Salinas, California, will produce six hundred tons of ice per day to ice over seven thousand cars per year! Something over \$7,000,000 in vegetables will be processed, packed and shipped annually. Day storage facilities alone will accommodate twelve hundred tons of ice. It is obvious that the extremely high efficiency of PALCO WOOL Insu-

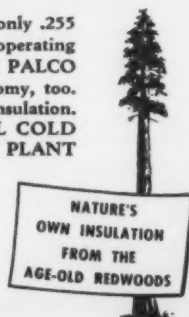
lation, with a thermal conductivity of only .255 Btu. will effect outstanding savings in operating costs. The permanence of flame-proof PALCO WOOL will insure long-term economy, too. Investigate this ideal low-temperature insulation. Write today for the PALCO WOOL COLD STORAGE MANUAL or LOCKER PLANT CONSTRUCTION MANUAL.

FLAMEPROOF INSULATION FROM DURABLE REDWOOD BARK

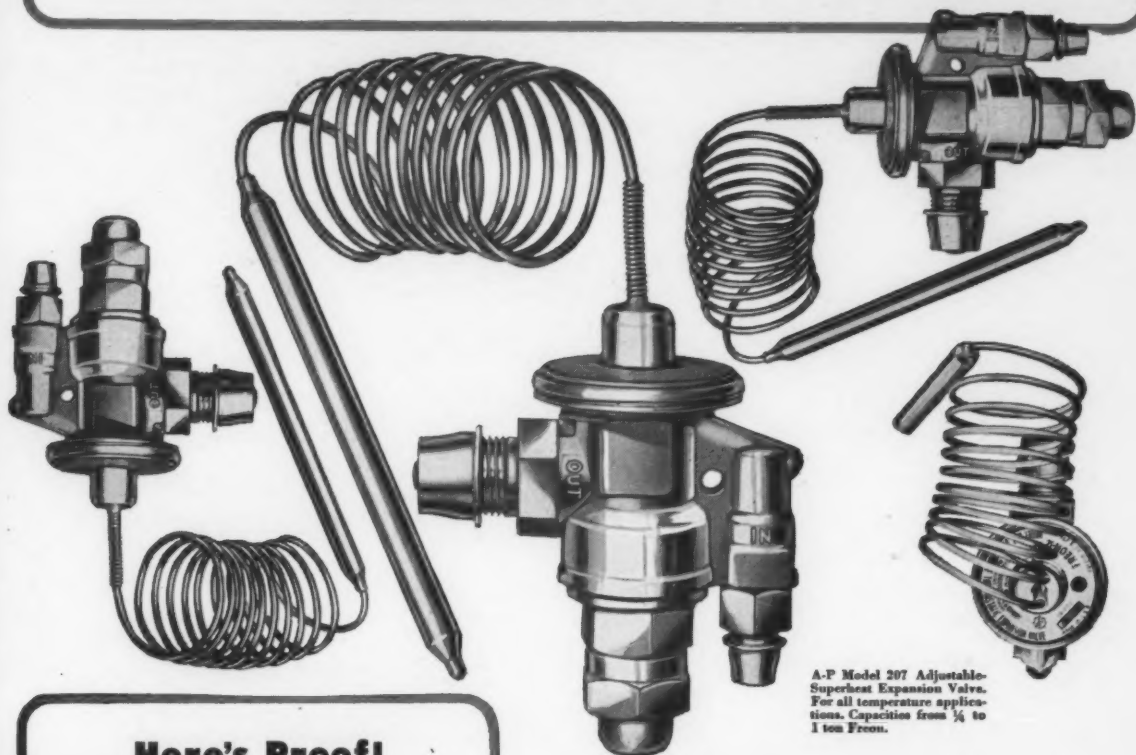
THE PACIFIC LUMBER COMPANY

100 BUSH STREET, SAN FRANCISCO 4, CALIFORNIA
3223 WILSHIRE BLVD., LOS ANGELES 36, CALIF. 35 E. WACKER DRIVE, CHICAGO 1, ILL.

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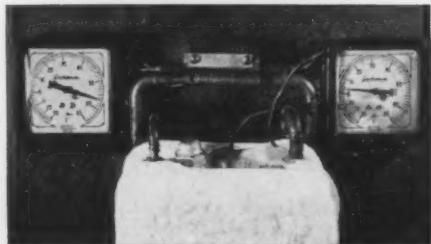


Get POSITIVE Bulb Control



A-P Model 207 Adjustable-Superheat Expansion Valve. For all temperature applications. Capacities from 1/4 to 1 ton Freon.

Here's Proof!



Here is dramatic proof of the efficiency of A-P Liquid-Charge. In the unit pictured above, there is a 54 degree difference between valve and bulb, and the valve is mounted upside down! Despite these conditions the bulb provides perfect control. Unusual? Yes; but typical of the efficiency and dependability you can expect from A-P Liquid-Charged Valves!

IN ANY POSITION . . . AT ANY TEMPERATURE With Dependable Liquid-Charged Expansion Valves

No matter what the application, you have no problem of accurate control when you use an A-P LIQUID-CHARGED Expansion Valve.

Install it right-side up—upside down—sidewise—in any position required by the application, even lower than the bulb. Install it in any ambient temperature, either warmer or colder than the bulb—it's all the same to the A-P Liquid-Charged Valve; you'll still get *POSITIVE, accurate control!*

More than that, you don't need a special-purpose valve for low temperature—another for commercial temperatures—and still another for air conditioning. Instead, ONE A-P Liquid-Charged Valve can be used for all purposes. Write for Bulletin R-5 describing A-P Liquid-Charged Valves — today!



DEPENDABLE Controls

A-P CONTROLS CORPORATION

(formerly Automatic Products Company)

2486 N. 32nd Street • Milwaukee 45, Wisconsin

Export address: 13 E. 40th St., New York, N. Y. • In Canada: A-P Controls Corporation, Ltd., Cooksville, Ontario

Stocked and Sold By Good Refrigeration Wholesalers Everywhere • Recommended and Installed By Leading Refrigeration Service Engineers

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IVAN is watching you

IVAN is a dyed-in-the-wool Communist. There are only 6 million party members like him in all Russia, yet these Communist brass-hats enforce the iron dictatorship of the Kremlin over 200 million Russians.

He's sold to the hilt on Red ideas. Which means he's out to get you. He believes it's either you or him . . . that the world is too small for both.

Ivan is working hard to beat you down. He has a big head start.

Right now he's got you in a bad spot. Ivan is afraid of only one thing.

He fears your ability to out-produce him in guns, tanks, planes.

Frankly, he doesn't think you value your free system enough to do it . . . to make willingly the sacrifices he has squeezed out of the Russians.

But he's wrong!

Because you and all of us have set out

to build more and better weapons—to do it faster all the time.

We must use every bit of know-how and inventive skill we have to improve our machines and methods—to turn out more and more for every hour we work. Only in this way can we become militarily strong.

But we've got to supply essential civilian

needs as well. We can't allow needless shortages to take prices skyrocketing and lower the value of our dollar.

Sure, that means sacrifices for everybody. But doing this double job well is the only sure way to stop Ivan in his tracks—and to save the freedoms which are ours and which he has never known.

FREE . . . this important booklet tells you how our American System Grew Great



How Americans developed better machines, power and skills to build a great nation . . . Why we have been able to produce constantly more per hour . . . How this has given us the world's highest living standard.

How we can meet today's challenge—Why we must expand our productive capacity . . . supply arms and essential civilian needs, too. Read how this dynamic process works in free booklet, "The Miracle of America," endorsed by representatives of management and labor. Send for your free copy today!

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45th St., Dept. B. P.
New York 19, N. Y.

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This advertisement, approved by representatives of management, labor and the public, is published in the national interest

COMMERCIAL REFRIGERATION and AIR CONDITIONING
1240 ONTARIO STREET CLEVELAND 13, OHIO



THE BETTER WE PRODUCE
THE STRONGER WE GROW

